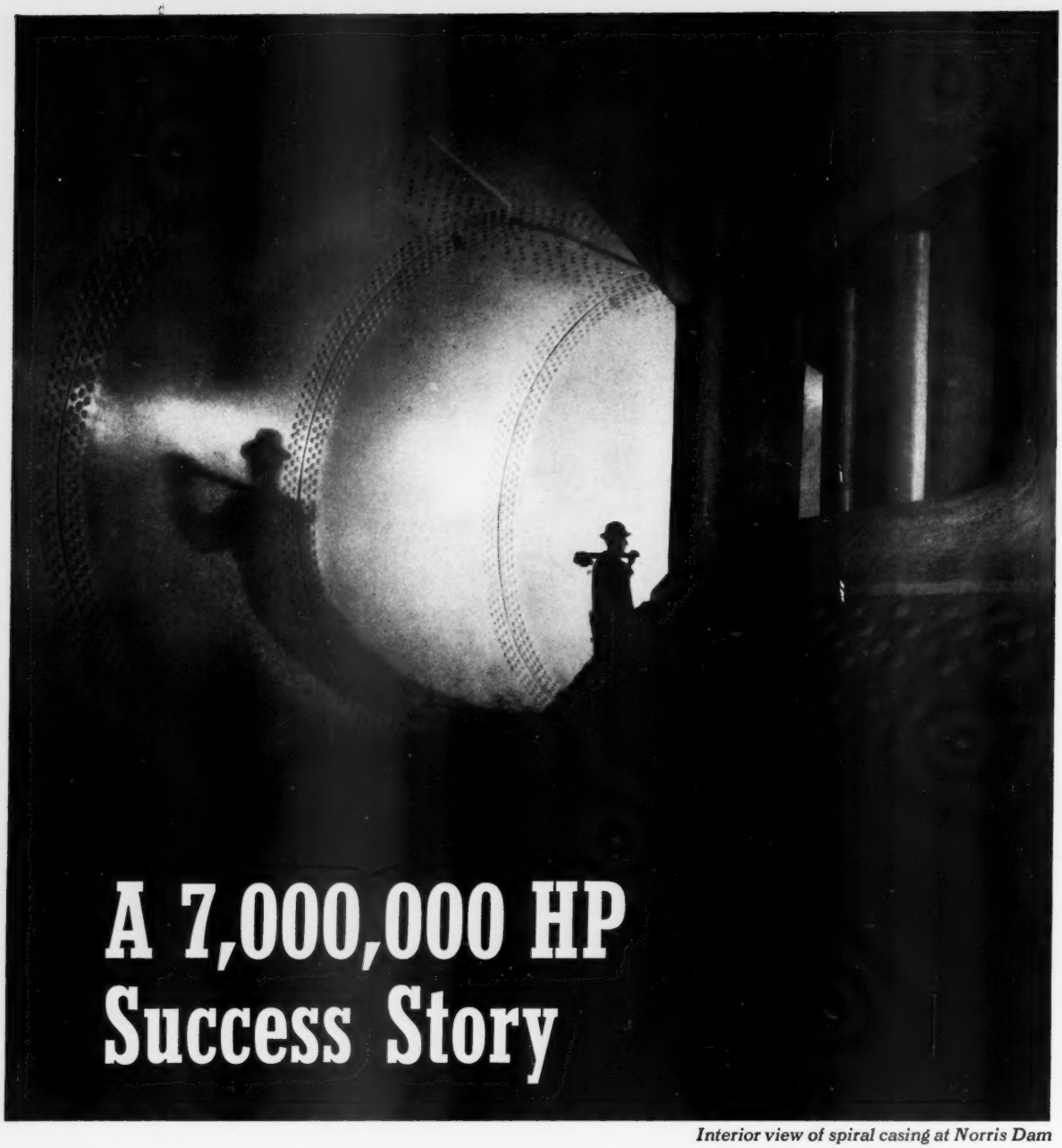
Public Utilities

Volume 55 No. 7 March 31, 1955



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26 Issues a Year
Annual Subscription Price

United States and possessions $15.00
Pan American countries $15.00
Canada $16; all other countries $17.50

Entered as second-class matter April 29, 1915, under the Act of March 3, 1879, at the Post Office at Baltimore, Md., December 31, 1936.

Public Utilities FORTNIGHTLY

VOLUME 55 MARCH 31, 1955 NUMBER 7

ARTICLES

FEATURE SECTIONS

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

Executive, Editorial & Advertising Offices....MUNSEY BLDG., WASHINGTON 4, D. C.
Publication Office .....CANDLER BUILDING, BALTIMORE 2, MD.

Advertising Representatives:
New York 6: Robert S. Farley, 111 Broadway, COrtland 7-6638
Cleveland 15: Macintyre-Simpson & Woods, 1900 Euclid Avenue, CHerry 1-1501
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10 BEST ANNUAL HEAT RATES

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9329 TANNERS CREEK
Indiana and Michigan Electric Co. on the American Gas and Electric System—
Three B&W Pressure-Fired Radiant Reheat Boilers with Gas Recirculation and Divided Furnace Construction.

9418 ALBANY
Niagara Mohawk Power Corporation.

9454 SCHILLER
Public Service Co. of New Hampshire—
Two B&W-built Mercury Boilers.

9510 DUNKIRK
Niagara Mohawk Power Corporation.

9540 J. R. WHITING
Consumers Power—
Three B&W Radiant Reheat Boilers.

9594 PHILIP SPORN
Appalachian Electric Power Co. and The Ohio Power Co. on the American Gas and Electric System—
Four B&W Pressure-Fired Radiant Reheat Boilers with Gas Recirculation and Divided Furnace Construction.

9630 ST. CLAIR
Detroit Edison Co.—
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9661 EASTLAKE
The Cleveland Electric Illuminating Co.

9815 ASTORIA
Consolidated Edison Co. of New York, Inc.—
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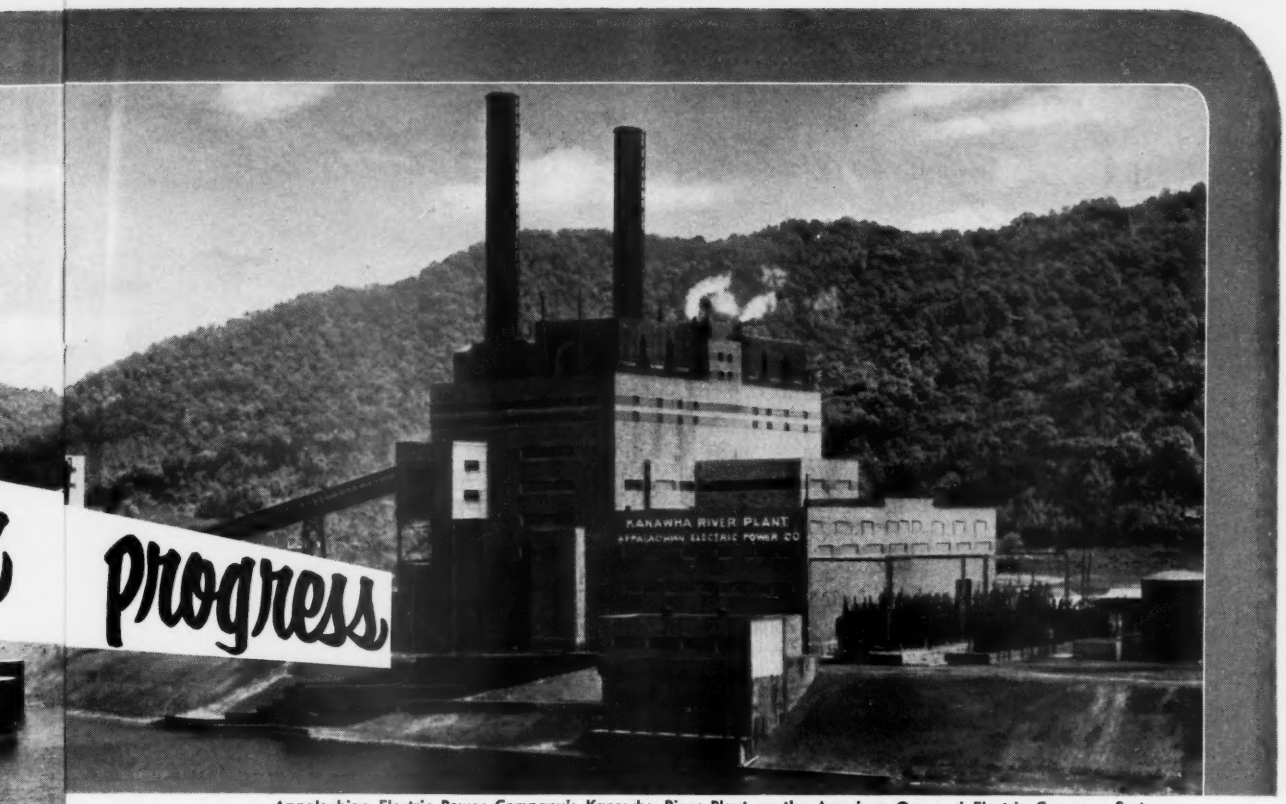
* Federal Power Commission figures



Appalachian Electric Power Company's Kanawha River Plant on the American Gas and Electric Company System.

Headed by a record 9170 Btu per net kwhr, these ten plants were the most efficient central stations in the country during 1953, the most recent year for which complete heat rate data are available.

Reflecting the decision of the electric companies to utilize the most recent engineering advances, even during a time of critical capacity expansion, the outstanding performance of these modern plants is a tribute to the foresight of the whole industry. It affords one more indication that the prime interest of this unique team of electric companies and their major suppliers lies in producing still lower-cost kilowatts for a still greater America.

B&W Boilers in many of these stations are designed with such advances as Pressure-Firing, Cyclone Steam Separators, Gas Recirculation and Divided Furnace Construction — features which have contributed substantially toward the outstanding efficiency levels achieved. Also, all steam generating units are equipped with reheaters, a development of major importance in improving plant efficiency.

Pressure-Firing

Among the many advantages of this important engineering advance, as utilized, for example, by the Kanawha River units, is elimination of air infiltration to reduce stack loss and assure greater efficiency. Maintenance is reduced and the use of forced-draft fans alone means easier starting, smoother operation and simpler controls. These are the reasons why more than 100 Pressure-Fired B&W units are now in service or under construction.

Cyclone Steam Separators

Operating inside the steam drum, these simple, stationary devices require no power or maintenance and do not take up building room. The Cyclone Separators assure positive natural circulation at high pressure, and with the steam scrubbers, make it possible to send steam of highest purity to the turbine. Consequently, turbine efficiency is maintained and turbine outages reduced.

Divided Furnace Construction

With this B&W construction, building volume is held to a minimum. Both sides of the furnace division wall are used to absorb heat and thus make it possible to achieve the required furnace cooling surface without excessive increase in building volume.

* * * * * *

The record heat rates set by these leading generating stations are closely followed by those of many more plants across the country which are producing low-cost kilowatts at efficiency levels unattainable just a few years ago. And B&W is continuing to devote its energies and its long-accumulated experience to the development of boiler designs that will contribute to still higher levels of steam generating efficiency. The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

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Pages with the Editors

READERS of the FORTNIGHTLY may wonder at times why we venture occasionally into the realm of foreign utility operation and regulation. The answer, of course, is to demonstrate by comparison whether our American way of doing things is better or whether we can learn something from practices abroad.

IF any particular article shows up American utility operation or regulation in a favorable light, we gain that much more confidence in our own institutions. And if, perchance, there is something we can pick up by way of helpful and useful information from other parts of the world, it is certainly within our American tradition to do so without hesitation due to any unwarranted pride in the perfection of our own institutions and practices.

AN interesting development along these lines came to our immediate attention recently, as the result of some comments published in these pages about depreciation practices for telephone accounting in the British Post Office. (See PUBLIC UTILITIES FORTNIGHTLY, February 3, 1955, issue, page 159.) It was noted there that the British Post Office has been aware for some time that the accumulation of depreciation reserves, based on instalment type accruals keyed to the straight-line age life of the original cost of plant, would result in making the Post Office use up its own capital in operations. This was because the depreciation reserve coverage for replacement requirements was falling progressively behind, every time plant units had to be retired.

As we noted in our pages, British fiscal officials labeled the original cost, age-life reserve accrual practice as "unrealistic" and deliberately set about augmenting the depreciation reserve, based on original cost amortization with extra accruals, which still fell behind, to some extent, in taking

C. L. "ROY" DOHERTY

care of continuous and progressive replacement requirements.

THIS view clashes, of course, with the traditional concept of depreciation accounting held sacred by many regulatory experts in the United States. Editorially, we do not presume to pass on the merits of the different shades of opinion, or about how best to settle this problem—especially in view of the differences of opinions shown among accounting experts themselves.

WHAT interested us, however, was a communication we received from Hans A. Heimbürger, head of the financial division of the Swedish Telecommunications Administration, which operates the telephone system in that Scandinavian country. Attracted by the comments made on the British Post Office's depreciation practice, Mr. Heimbürger writes to tell us "it might interest your readers to know that in the Swedish Telecommunications Administration allowances for depreciation are since July 1, 1951, made on the basis of the cost of replacement of installations."

MR. HEIMBÜRGER sent along an English edition of the jubilee issue of his administration's publication, *Tele*, containing an

BEFORE YOU BREAK GROUND

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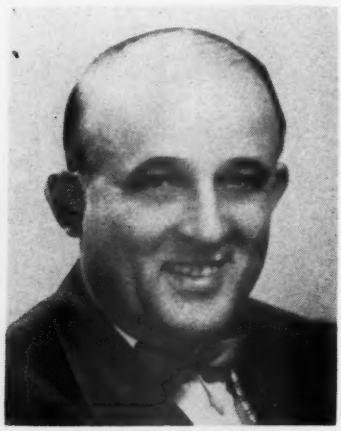
article by himself outlining the financial practices of that government utility service. This article has been digested in this issue (page 391). And so, we welcome the opportunity of giving our readers in the United States another peek into the way things are done in the other fellow's back yard.

INCIDENTALLY, we note that contrary to the British Post Office and our own Tennessee Valley Authority practice, the Swedish Telecommunications Administration is required to make its own separate accounts, independent of general government accounts. Services rendered to other government authorities are charged for at normal rates and the Swedish administration itself has to pay to other agencies.

THE opening article in this issue tells how state commissioners are meeting the challenge of inflation. The author, who stresses the public relations of regulation, was last year the president of the National Association of Railroad and Utilities Commissioners. He is the HONORABLE C. L. "ROY" DOHERTY, who has been a member of the South Dakota Public Utilities Commission since 1936. Born in Waterloo, Nebraska, and educated at Fremont College in that state, "ROY"—as he is known to his many friends throughout the country—came to Rapid City, South Dakota, in 1910, where he attended the State School of Mines. After a business career in Rapid City, during which he served as director of the chamber of commerce for twenty years, president of the Retail Merchants Association for five years, and president of the State Pharmaceutical Association for one year. He was elected mayor of Rapid City for three terms. During his service on the South Dakota commission, he has been active in the affairs of the NARUC, serving on its executive committee for the past ten years.



PHILIPP H. LOHMAN

* * * *

PROFESSOR PHILIPP H. LOHMAN, whose article on the economics of natural gas production controls begins on page 358, is a newcomer to our pages, but well known in the field of financial and economic writing. Since 1945 he has been chairman of the department of commerce and economics of the University of Vermont. Educated at George Washington University (AB, '33) and the University of Southern California (AM, '34; PhD, '36), he was a research fellow at the Brookings Institution, Washington, D. C. ('35, '36). His teaching experience includes Miami University (Ohio), University of Idaho, University of Wyoming, and the University of Southern California. He has also lectured at The National War College. He is the author of two books and numerous articles in periodicals and book reviews, dealing with financial and economic matters. He was formerly contributing editor in business and finance for Time, Inc.

* * * *

HOW is Great Britain's power system, which has been socialized for the past five years, geared to bear the development and transition expense of nuclear power? In the second instalment of his 2-part series (beginning on page 366) ERNEST R. ABRAMS, New York city financial writer, shows that economic conditions following the war and the need of exports have seriously delayed the British Electricity Authority's construction program and will continue to do so.

THE next number of this magazine will be out April 14th.

The Editors

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ARE PUBLIC POWER PROGRAMS IN THE PUBLIC INTEREST?

Alexander M. Beebee, president of the Rochester Gas and Electric Corporation, is slated to discuss at the American Power Conference in Chicago the principles underlying our public power program. The author feels that they no longer serve the public interest, and now result in perpetuating unequal taxation and opportunity of enterprise. To correct these inequalities, he proposes three steps: (1) to eliminate the so-called preference clause; (2) to make public power self-supporting and free of subsidy; (3) to abate the tax avoidance feature of such operations. His article is in substance a popularized restatement of his thought-provoking address before the Chicago meeting.

POSTMEETING REPORTS TO UTILITY STOCKHOLDERS

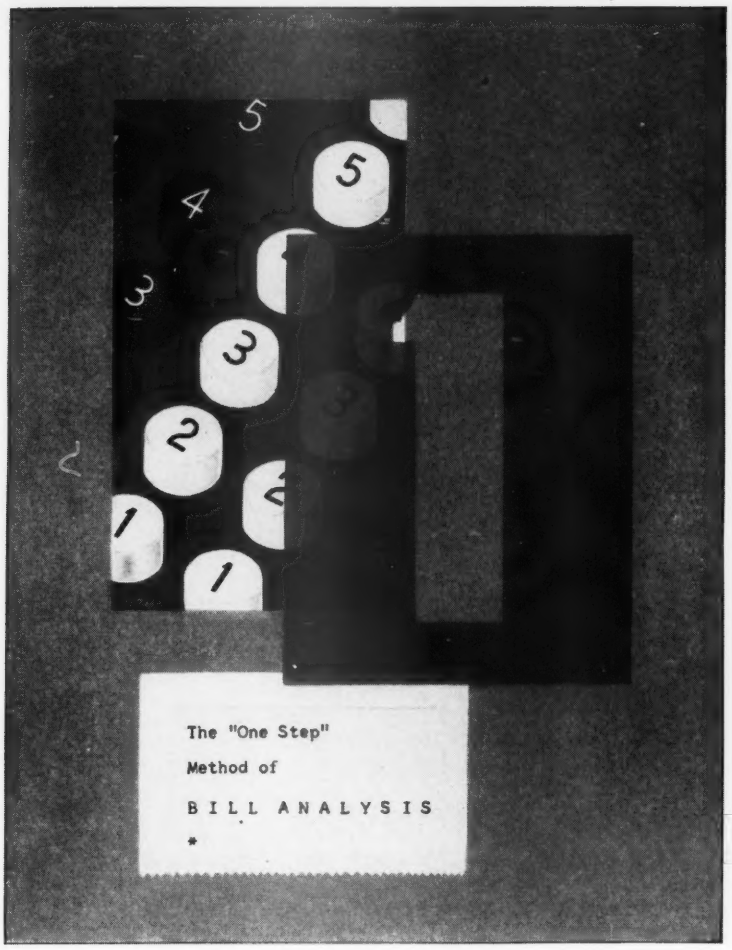
With the modern trend to widespread holdings of stocks in public utilities many a stockholder finds its inconvenient or impossible to attend the company annual meeting. Realizing this, there has been a growing effort on the part of utilities to keep stockholders informed on what has taken place at their annual meetings. In these days, of tremendous facility expansion and the concomitant seeking of capital funds, informed stockholders are real assets. Companies are using many different types of postmeeting reports to keep their stockholders informed. Shelly Pierce, financial editor of **The Journal of Commerce** and an able writer on financial topics, has prepared, for **FORTNIGHTLY** readers, a noteworthy account of what utilities are doing along these lines.

MOVING PLATFORMS IN NEW YORK SUBWAY TRANSIT

Ever since a model demonstration two years ago proved the feasibility of a moving platform to take the place of the east-west shuttle in mid-town Manhattan, the idea of a conveyor belt system has fascinated people interested in transit systems far and wide. Colonel S. H. Bingham, executive director and general manager of the New York City Transit Authority, first broached this idea of a continuously moving belt to carry passengers, to engineers of rubber and belt manufacturing companies back in 1948. But it took three years to develop a plan on paper that seemed workable and safe. Now New York city is going ahead with this far-visioned plan of moving passengers by conveyor belts. Colonel Bingham gives us the story right from headquarters.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***



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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

DAVID LAWRENCE
Columnist.

"Confiscation is the goal of the Socialists."

HAROLD W. DODDS
President, Princeton University.

"Ideas do matter. They become the public opinion of tomorrow."

HOLMES ALEXANDER
Columnist, Los Angeles Times.

" . . . the folly of overreaching for power—the thou-shalt-not-covet Commandment—has been validated again and again and again."

BENJAMIN F. FAIRLESS
Chairman of the board, United States Steel Corporation.

"There is nothing new about automation except the word itself. The facts of automation, and the mechanics of it, are older than our own American Republic."

EDITORIAL STATEMENT
The Wall Street Journal.

"There can be little hope of a successful onslaught on chaos and cost until the underlying issue of the welfare state and its twin, big government, is squarely faced."

KEITH FUNSTON
President, New York Stock Exchange.

"In the future, as in the recent past, our major objective will be to provide people everywhere with the opportunity to own shares in American business, on a sound basis."

KEITH S. MCHUGH
President, New York Telephone Company.

"It is a startling fact that [New York] telephone rates have increased an average of only 16 per cent in contrast to a general increase in the cost of living of 92 per cent. Investors will have to put another $100,000,000 of their savings into the business to carry out the huge new program."

GEORGE GRANGER BROWN
Dean, college of engineering, University of Michigan.

"Energy is the foundation of our physical lives. Energy in the form of fuel is required to provide comfort in winter, to produce our materials, to provide transportation, light, and communication, and make possible the tremendous productivity of the individual American worker. Our civilization now literally depends on low-cost, copious, and continuous supplies of energy."

RAYMOND R. PATY
Director, Tennessee Valley Authority.

"TVA is an invention in modern government which utilizes the initiative of the people, the participation of local government, and the strength and uniting force of the federal government. Through TVA, thousands of our overseas neighbors have personally observed, and millions will benefit from the accomplishment of America's foremost engineers, of her most brilliant architects of government, and of her skillful, resourceful, and energetic people. Through TVA, democracy today is stronger, both at home and abroad, and peace is more secure."

REMARKABLE REMARKS—(*Continued*)

R. H. SULLIVAN
Vice president, Ford Motor Company.

"Automation will not eliminate jobs. It will supplant heavy, dangerous, and unpleasant jobs with easier, more skilled, more pleasant, and interesting jobs."

EMERSON P. SCHMIDT
Economic research director, Chamber of Commerce of the United States.

"The tragic thing about guaranteed wage plans, is that in industries where they work they aren't needed, and in industries where they're needed they wouldn't work."

JAMES J. NANCE
President, Studebaker-Packard Corporation.

"The greatest single economic force in America is advertising, because it sets up the chain of events that operates the most powerful economic wheel in the world."

E. G. GRACE
Chairman of the board, Bethlehem Steel Company.

"A healthy company, making a wide range of products, profitably, in a growing economy, offers the strongest possible kind of insurance as to employment stability and opportunity."

EUGENE M. ZUCKERT
Former member, Atomic Energy Commission.

"I expect to see the day when large amounts of electric power come out of atomic energy directly, instead of using atomic energy as merely another means of heating water to produce steam."

HENRY COPELAND
Washington state senator.

"A private utility that is building plants to fulfill its public service responsibility should not be forced to live in constant hazard that these plants may be taken from it arbitrarily for the advantage of some public utility district."

ROBERT S. BYFIELD
New York financial commentator.

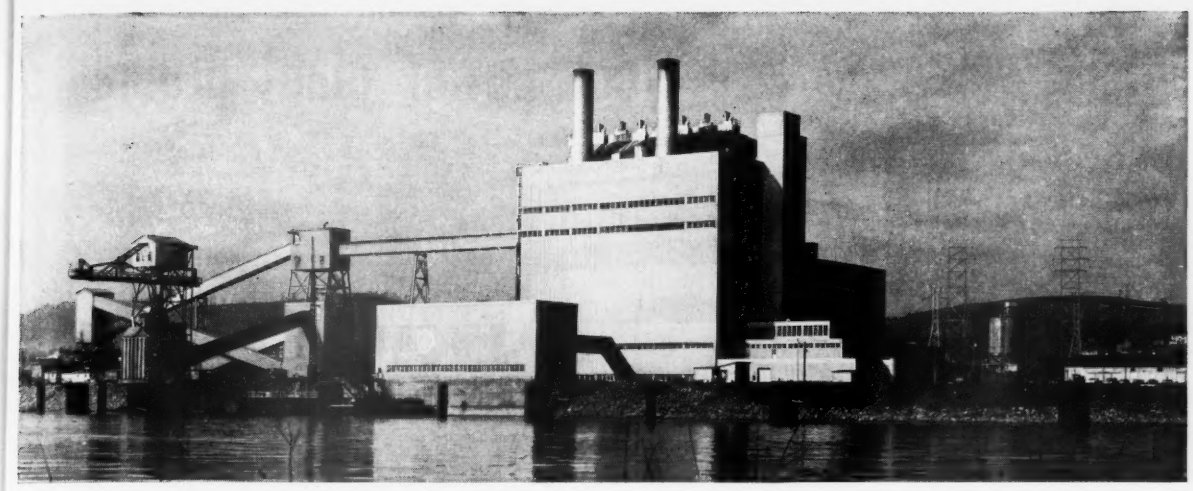
"To belittle our accomplishments, impugn our motives, and cast doubt on our future are prime objectives in the psychological warfare of the Kremlin. Unwitting yet effective auxiliaries of the Soviets are the Socialist thinkers in Western countries, who, though non-Communists themselves for various reasons, have no faith in any free, competitive economy particularly our own. We have said this before and we say it again."

DON G. MITCHELL
President, Sylvania Electric Products, Inc.

"Data processing [by electronics] will simply enable management to operate more effectively, with faster and better information. But it won't eliminate the need for decentralized responsibility and authority. That concept is based not on the speed of information, but rather on the saturation points of the human mind. No matter how readily available information may be, and in what form, there are limits to a load a manager can and should carry."

FRED A. HARTLEY, JR.
Former Republican Congressman from New Jersey.

"If we extend compulsory unionism to all industries, what we have actually done is to give union leaders control over all workers. With that control will go control over all industry and control over government, too. The stake then in this fight over compulsory unionism is control over the United States. Or to put it another way, the triumph of compulsory unionism means labor fascism. Perhaps it would be a benevolent kind of fascism, but it would be fascism and a mockery to the democracy which, despite its faults, has made us a great nation; a nation in which it is a privilege to live."



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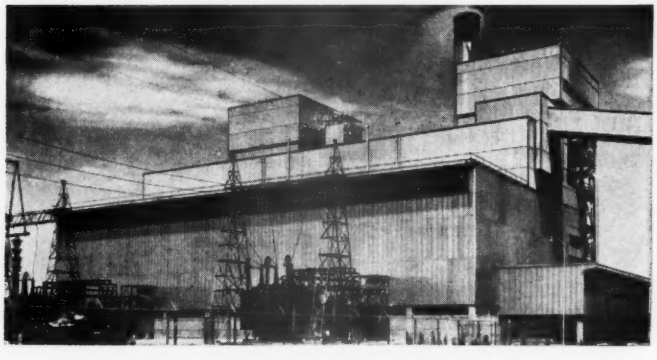
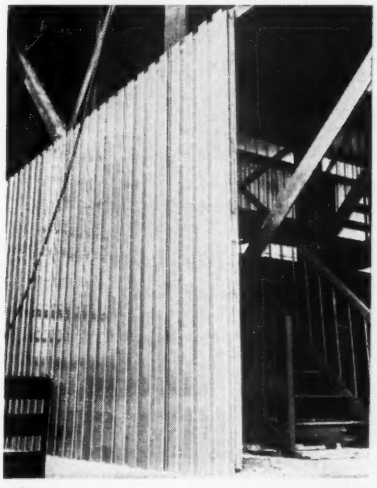


Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.

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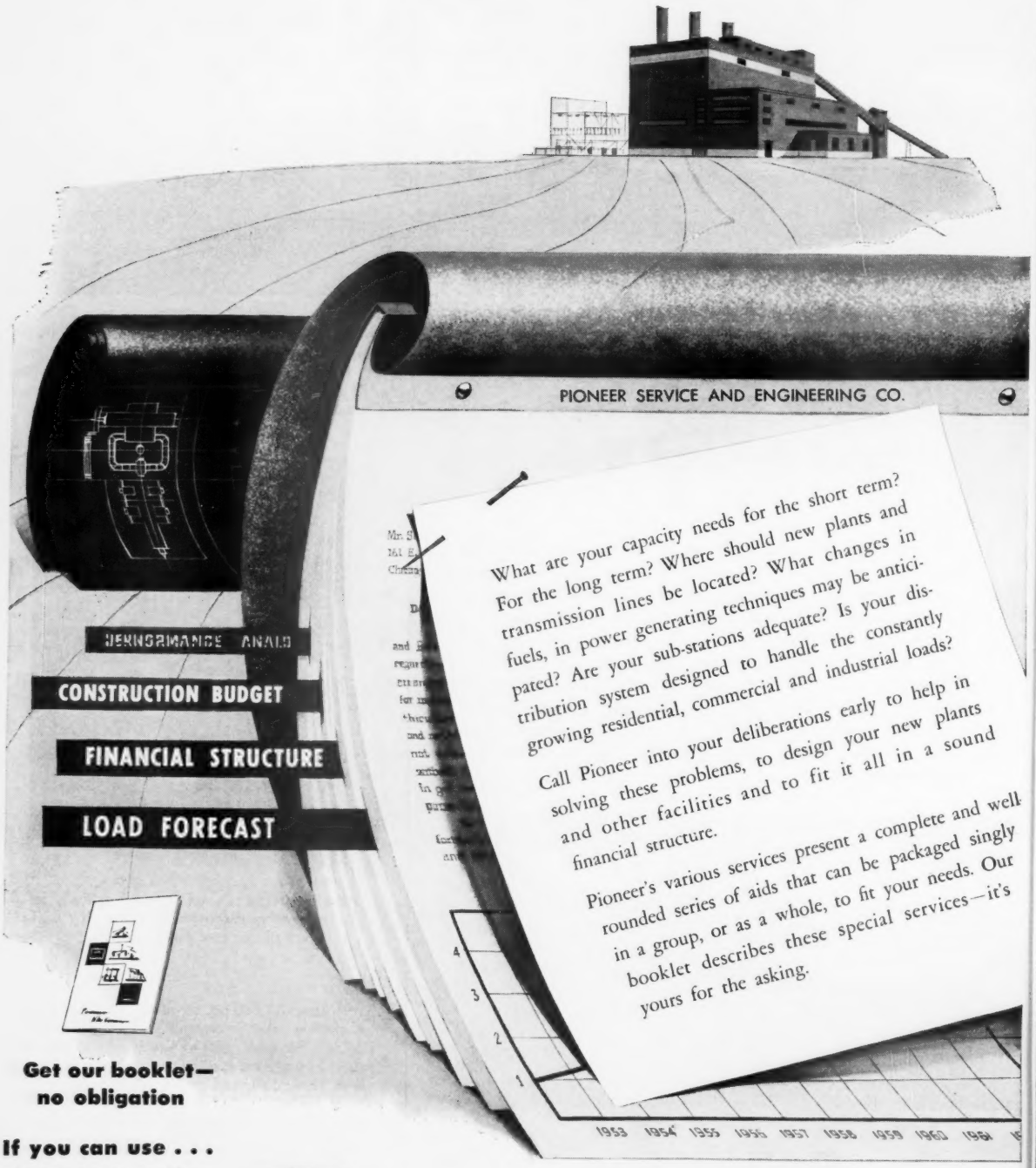

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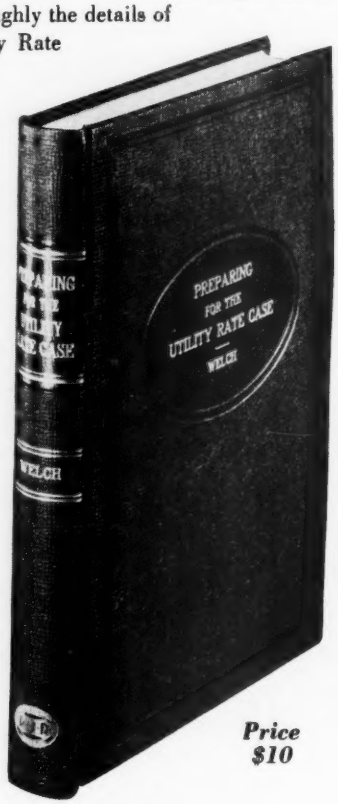

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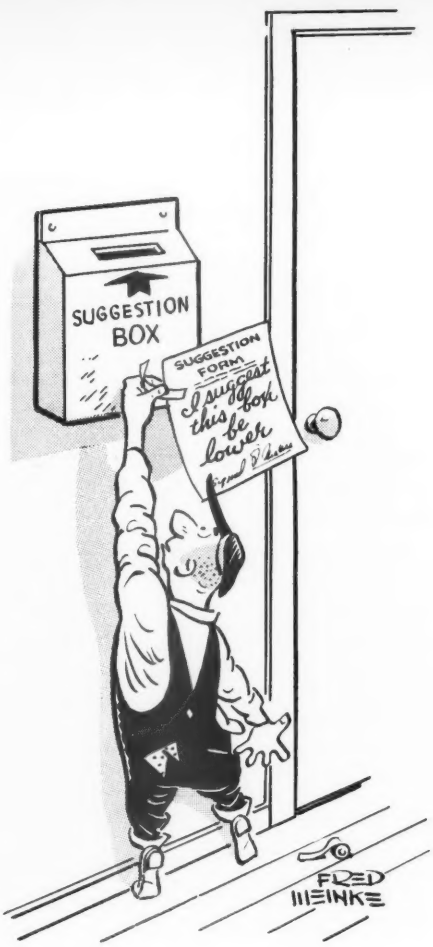

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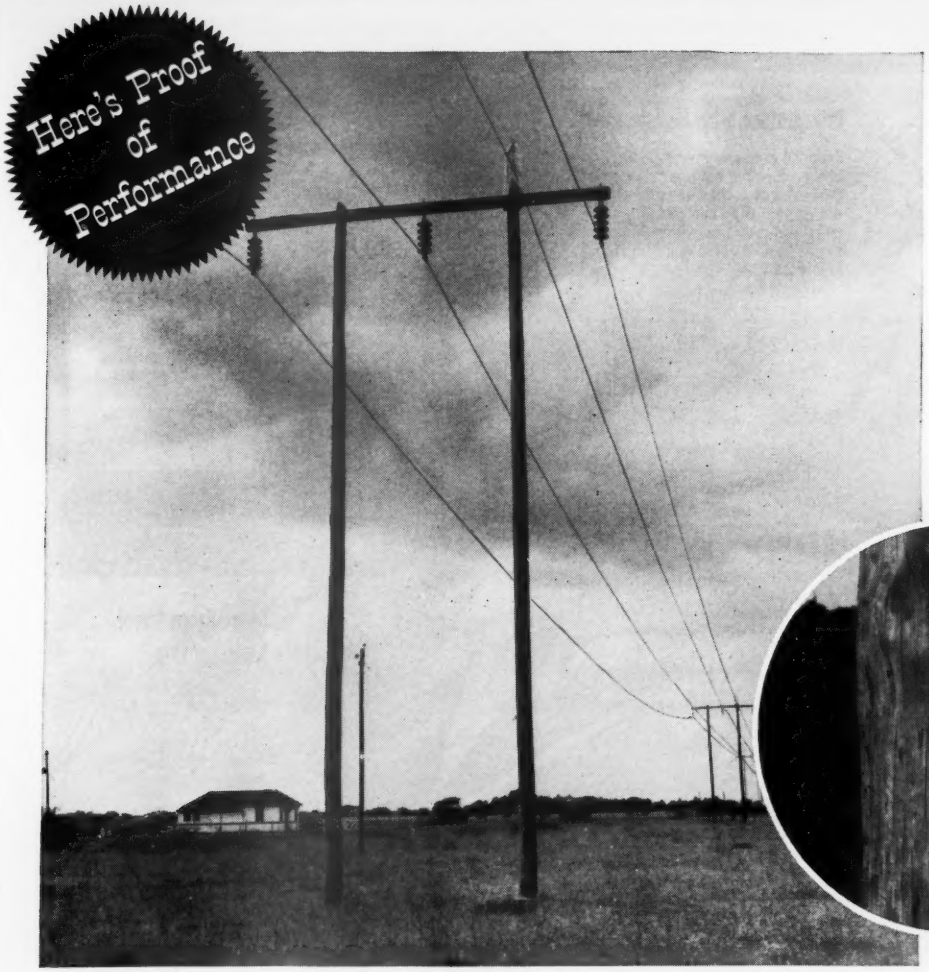
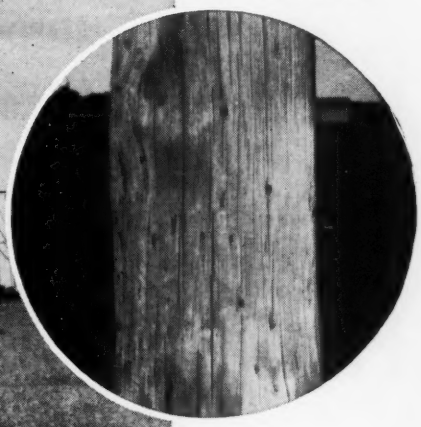


SOME OF THE 28-YEAR-OLD pressure-creosoted poles in the Wallis-Sealy line of Houston Lighting & Power Company, Houston, Tex. The poles carry three phase and one static wire.

A CLOSE-UP of one of the poles showing its excellent condition. They have a future life expectancy of five to ten years.



247 pressure-creosoted poles installed in 1926

...233 STILL IN GOOD CONDITION TODAY

● A combination of warm moist climate and the prevalence of termites makes the use of pressure-creosoted poles a necessity for Houston Lighting & Power Company. It means the difference between five years of life for an untreated pole to 30 to 35 years for a treated one.

A good example of sound pole line planning is found in the 11.8 miles of 66 KV outer loop between the Texas communities of Wallis and Sealy—all pressure-creosoted poles. Here 247 poles were installed in 1926 (actually 260—but 13 were since replaced to obtain greater height). Today, after 28 years of exposure to weather and wood's natural enemies, 233 poles—or over 94% of the original line—remain in good condition, with a future life of 5 to 10 years.

Houston Lighting & Power Company first used pressure-creosoted poles in 1921, and conversion has been complete now for more than 20 years. Southern yellow pine and fir poles are treated with Creosote to 10 pounds retention.

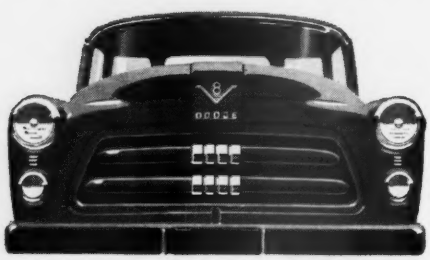
You can count on uniformly good results when your poles are treated with USS Creosote—the product of United States Steel's tar distilling operations. For more information on USS Creosote and the long pole life it assures, contact our nearest Coal Chemical sales office or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

USS CREOSOTE USS

4-1466

UNITED STATES STEEL

How you get more power, use less gas with POWER-DOME V-8 truck engines!



Truck owners everywhere report more power and less fuel consumption with new Dodge Truck Power-Dome V-8 engines. AAA-supervised tests *proved* the power of Dodge Truck V-8's in a history-making Pikes Peak climb . . . proved the economy of Dodge Truck V-8's in a sensational 22-mile-per-gallon Economy Run.

Look at the pictures and captions shown on this page—then, for further details and an eye-opening road test, see your dependable Dodge Truck dealer!

DODGE "Job-Rated" TRUCKS

A PRODUCT OF CHRYSLER CORPORATION

A herring, dragged across the trail, can change the wrinkle of your nose. Attention thus gained can be diverted away from the important objective in mind.

Facts pertinent to the need should be evaluated ... from every angle. For example ... the purchase of transformers should not only be based on initial cost ... but also upon cost required for maintainence and operation. In short, efficiency and dependability during the transformer's life span. Short term gains can easily be erased by long term operation penalties.

ARE YOU...CHASING A HERRING?

Check your purchases ... know *what* you are getting *before* you buy in addition to its cost. And ... if you specify Moloney ... you will be buying "dependability at its best!"

ME55-13

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Power Transformers • Distribution Transformers • Step Voltage Regulators • Regulating Transformers Load Tap Changing Transformers • Load Center Transformers • Unit Substations • Network Transformers • Constant Current Transformers • Capacitors • Transformers For Electronics

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UTILITIES *A·l·m·a·n·a·c·k*

MARCH-APRIL

Thursday—31 *Illuminating Engineering Society begins southern regional conference, Clearwater, Fla.*	**April—Friday—1** *American Power Conference ends, Chicago, Ill.*	**Saturday—2** *Rocky Mountain Electrical League will hold annual spring conference, Denver, Colo. Apr. 17-19.* ***Advance notice.***	**Sunday—3** *Illuminating Engineering Society begins southwestern regional conference, San Antonio, Tex.*
Monday—4 *Atomic Industrial Forum, Inc., begins meeting, San Francisco, Cal.*	**Tuesday—5** *United States Independent Telephone Association ends 2-day executives' conference, Belleair, Fla.*	**Wednesday—6** *Annual Young Men's Utility Conference begins, Indianapolis, Ind.*	**Thursday—7** *Southeastern Gas Association begins sales and advertising round-table conference, Charlotte, N. C.*
Friday—8 *Southeastern Electric Exchange, Engineering and Operating Section, ends 2-day meeting, New Orleans, La.*	**Saturday—9** *American Society of Mechanical Engineers will hold spring meeting, Baltimore, Md. Apr 18-21.* ***Advance notice.***	**Sunday—10** *American Water Works Association, New York Section, will hold annual meeting, Buffalo, N. Y. Apr. 20-22.* ***Advance notice.***	**Monday—11** *Indiana Gas Association will hold annual meeting, French Lick, Ind. Apr. 20-22.* ***Advance notice.***
Tuesday—12 *American Gas Association-Edison Electric Institute begin joint conference on operation of public utility motor vehicles, Cincinnati, Ohio.*	**Wednesday—13** *American Institute of Electric Engineers begins southern district meeting, St. Petersburg, Fla.*	**Thursday—14** *Gas Appliance Manufacturers Association begins annual automatic gas range conference, New York, N. Y.*	**Friday—15** *Northwest Electric Light and Power Association, Engineering and Operation Section, ends 3-day meeting, Spokane, Wash.*

Courtesy, Bell Telephone Laboratories

Tubeless "Electronic Brain" Computer

Using 800 transistors instead of vacuum tubes, this device operates "cold" with a minimum of space and power requirements.

Public Utilities
FORTNIGHTLY

VOL. 55, NO. 7 MARCH 31, 1955

The Public Relations of Regulation

Inflation has placed a special burden on the regulatory commissions which have the duty and responsibility of seeing that the public is supplied with adequate utility service, which only adequate rates can insure. How are the commissions in the United States meeting this test?

BY THE HONORABLE C. L. "ROY" DOHERTY*

THE common man in the United States today lives in a world of magic. With a turn of his wrist he can fill a glass with water, pure and life-preserving, a precious commodity in many other parts of the world. He flips a switch and commands illumination and power beyond the wildest dreams of his grandfather.

He picks up a telephone and in conversational tones makes himself heard next door, across the nation, or around the world—and privately too. In most areas, he has thrown away the coal shovel and ax in favor of clean, ever-ready gas heat. More and more his wife is cooking with gas—or electricity.

Look at the statistics to see how widespread are these blessings. For instance, there is a telephone in seven out of ten

*Member, South Dakota Public Utilities Commission. For additional personal note, see "Pages with the Editors."

households, whether crowded together as apartments or far apart in the remote and lonely countryside. And 98 out of every 100 families in the nation enjoy electric service.

These facilities do not just fall into the customer's lap with the greatest of ease. The last ten years have shown most dramatically how complex, how gigantic is the endeavor that provides them. These years have shown how big is the task of regulating these enterprises so that the customer is protected as well as served. This same regulation must consider the interests also of the workers in these industries—and the stockholders who invest their savings in utilities.

THESE recent years have shown beyond a doubt that the interests—of the customers, stockholders, and employees—all have been well safeguarded through wise regulation of private utility companies by state and federal commissions.

It has been a very busy period for the commissions, as they tried to keep large numbers of utility companies at least even with the rapid changes in economic conditions.

It has often been hard to balance nicely the interests of customer, employee, and stockholder, and no doubt there have been some mistakes made, but I think I am safe in saying that where we have erred we have done so on the side of lower rather than higher rates paid by the customer.

The utility companies have managed very well in satisfying the demand for their services—a demand that has grown so fast in the expanding postwar economy.

The public has entrusted billions of dollars to the utility companies for new equipment and properties so that they could satisfy the appetite of the average consumer who clamors for utility services he did not previously enjoy. A sizable hike in real income of the average worker—about 40 per cent—has sharpened the appetite for utility services.

In the face of this amazing expansion, we in the regulatory field take pride in the part we have played in keeping utility rates reasonable while protecting the financial integrity of the utility companies.

I must say that this has been no easy task. Inflation has meant a whole series of increases in the cost of providing service. Wages of utility workers have increased almost every year and today wage levels average more than twice those of the prewar period. We have seen tax rates climb until tax levels are about double those at the start of World War II. And costs of materials and supplies have followed similar upward courses.

AS a matter of fact, utility companies obviously have operated at a considerable disadvantage in comparison to other business. With the limitation in earnings which naturally applies to those operating as monopolies, the utilities have been forced to finance their expansion in the postwar period largely through new capital—investors' money. Outside industry, unregulated as to earnings, has been able to meet a heavy proportion of its increased capital requirements by plowing back a goodly portion of its earnings into new plant. In spite of these differences, again I say that we can be quite well satisfied with the general health and status of the utility services, for whose very existence we share responsibility. Private industry has demonstrated to the

American public its reliability, its creativeness, and its devotion to the public interest.

Let's look at taxes for a moment, for they are an important factor which greatly affects public utilities.

The truth is that we all pay more income taxes than appear on our personal income tax returns. When we pay our utility bills we, the customers, are paying utility income taxes. In effect, we are contributing to other people who happen to be customers of government-aided, tax-free utilities.

It is amazing how many otherwise well-informed people fail to realize that income taxes of utilities have to be considered a cost of operation. The gravity of the situation is all too apparent to the commissioner, who must increase the charges paid by utility customers by $2 for every dollar that the utilities retain as net income after federal income tax.

ANOTHER postwar tax problem for utilities, acute until last year, was the excise levy on communications and transportation services. One of the significant developments of 1954 was enactment of the Federal Excise Tax Reduction Act and consequent reduction in the highly discriminatory and inequitable federal excise tax on communications and passenger transportation services. This was an action long promoted by the National Association of Railroad and Utilities Commissioners.

The act reduced the excise tax on these services to 10 per cent, from rates that had ranged as high as 25 per cent previously. But the tax rate is still exceedingly high and obviously discriminatory, in that the 10 per cent rate is as high as that imposed on certain luxury items like furs and jewelry.

In the face of all these inflationary conditions, it seems to me the effectiveness of the regulatory system in this country and the ingenuity of the public service industry are strikingly demonstrated by the fact that utility rates have not moved ahead nearly so much, in proportion, as have the basic costs of furnishing the services involved.

To promote greater public understanding of these difficulties faced by public utility management and those who regulate them should be the constant aim and purpose of state commissioners. In this way, by virtue of the fact that an informed electorate is one of the safest pillars of our form of government, we help to perpetuate sound and beneficial public utility regulation. All, of course, to

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the benefit of both the utilities and the public they serve. This means that utilities and the regulatory bodies should use every means to tell their story to the public.

We should remind people that incentives distinguish a free country from a police state and its emphasis on punishments instead of incentives. The opportunity to earn a reasonable profit is the rightful incentive of utilities as well as other free enterprises. Denial of this opportunity is the same as taking private property for public use without compensation. Let us not overlook opportunities to tell this fact often enough so that it is well understood.

THE year 1954 saw other specific accomplishments in the field of regulation besides the reduction of taxes. One thing was the report of the NARUC committee on bus company regulation. Many of you will recall that this committee began its work in 1951 with representatives of the National Association of Motor Bus Operators and the American Transit Association. These three committees cooperated and worked conscientiously and made a comprehensive study of the principles of rate regulation in the motorbus industry.

Regulatory bodies customarily fix bus rates in accordance with the so-called "return on investment" theory. This theory originated in the early statutes applying to railroad, electric, telephone, gas, and other public utilities. It appears, according to the study, the "return on investment" basis for rate making does not fit conditions in the bus industry.

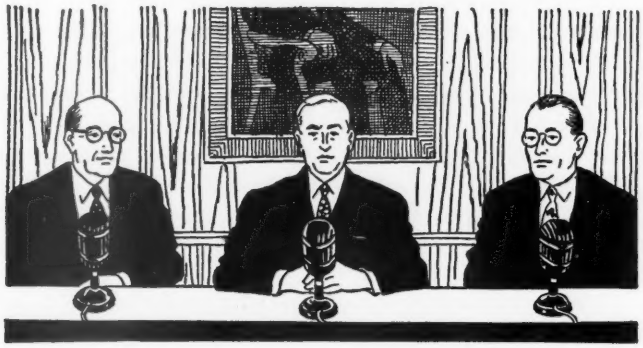
While railroad, electric, telephone, gas, and other public utilities have a substantial investment in real property, the same does not apply generally to the bus industry, whose primary item of investment is its rolling stock. As a result of extended conferences held among these three groups, the special NARUC committee finally issued a report in which the "operating ratio" approach to rate making was recommended.

As the committee report states, this theory has been proposed as a means of overcoming the deficiencies which have been attributed to the general use of "return on investment." It utilizes the "operating ratio" which may be defined as the relationship between expenses and gross revenues. It is expected that this "operating ratio" method of rate making should provide an amount sufficient to conserve the capital of a given company, assure its perpetuation, and give it access to new capital if necessary.

I WOULD like to point out another significant development of last year—the passage of an act that returned to the states their jurisdiction over local natural gas companies. This is something which the NARUC advocated by resolution as early as November, 1950, and it represents a major victory for the association. The bill passed the Senate on March 15, 1954, and was signed by President Eisenhower a few days later. It is interesting to read the President's opinion on state regulation, expressed in the statement he issued when he signed the bill.

The statement follows:

> I have today approved HR 5976, a bill "To amend § 1 of the Natural Gas Act."
>
> This measure preserves the authority of the Federal Power Commission to



Regulation Is Meeting the Test

"It is my firm belief that utility services in the American economy can be sufficient only under wise regulation of free enterprise, and only under wise regulation can enterprise remain free—and ready to serve the public and the nation fast and well when the need is greatest. The utility industries and the commissions have performed a difficult task during the past ten years—a period of extreme inflation, continual increases in costs, unprecedented expansion of services, and numerous applications for adjustments in utility rates to keep pace with the effects of inflation."

regulate the rates which may be charged for natural gas moving in interstate commerce up to the time it reaches the state in which it will be wholly consumed. At the same time the bill makes it possible to remove from federal regulation persons and facilities receiving gas within or at the boundary of a state if all of the natural gas so received is to be used within that state. The bill contains a congressional declaration that these matters are primarily of local concern and subject to regulation by the several states. The removal is operative only if the states exercise and enforce jurisdiction over rates and services.

I have approved this bill because of my conviction that the interests of the individual citizen will be better protected when they remain under state and local control than when they are regulated or controlled by the federal government. I shall support state regulation of functions and matters which are primarily of local concern whenever possible and when not contrary to the national interest.

The state regulation provided in HR 5976 presents a new challenge to the state governments and their regulatory commissions. This measure places the responsibility for protection of consumer interest for intrastate matters squarely where it belongs—in the hands

of the people of the states and their duly elected or appointed officials. I believe effective and competent discharge of that responsibility will result.

If experience should demonstrate that the act creates a larger area of regulation by the states than they will be able to handle effectively in the public interest, I shall promptly recommend that the Congress take whatever remedial action appears to be necessary.

ONE of the matters of great importance to state commissions is the seriousness of the annual multimillion-dollar railroad passenger deficit. The ICC reported this deficit for 1953, for instance, as more than $700,000,000. This was an increase of $61,600,000 over 1952, and the largest deficit of all times. This alarming increase was more clearly revealed by the revision of the Interstate Commerce Commission's "Rules Governing the Separation of Operating Expenses," which became effective on January 1, 1953.

State commissioners are vitally concerned over the proper allocation or separation of passenger operating cost, just as we are concerned with the proper separation of revenue and expense of intrastate and interstate telephone service. While head of NARUC, I requested the ICC to make a thorough study and investigation into the methods and formulae for separating passenger and freight expenses, to be conducted in co-operation with the state commission membership of our special committee on co-operation with the ICC in the study of the railroad passenger deficit problem.

Transportation, power, communications, and fuel supply—they present more than a peacetime challenge to state commissioners, of course. These services are indispensable in times of war or other great emergency. This fact makes continuing wise regulation an element in the ultimate survival of free countries.

It is my firm belief that utility services in the American economy can be sufficient only under wise regulation of free enterprise, and only under wise regulation can enterprise remain free—and ready to serve the public and the nation fast and well when the need is greatest.

THE utility industries and the commissions have performed a difficult task during the past ten years—a period of extreme inflation, continual increases in costs, unprecedented expansion of services, and numerous applications for adjustments in utility rates to keep pace with the effects of inflation. It has been a very strenuous period, with greater work loads and heavier responsibilities on the commissions than at any time previously.

I think that, together, we have succeeded in helping to strengthen and preserve the American system of privately operated utility enterprises.

By what I have said, I do not want to leave the impression that all the problems have been solved. I suspect that rougher times lie ahead, both for the utilities and for those who regulate them. From all appearances, we are moving into an atmosphere which may be somewhat different from that in which we have been functioning in the past. During the rapid expansion and inflation of the postwar period and when the cost of furnishing service continued to rise, rates for utility services moved upwards following the tide of a general rise in the costs of most all goods and services. The public, generally,

based upon their own individual experiences, naturally expected that rates for utility services should move in harmony with other prices.

With some slackening of the inflationary movement we may be coming into a period of leveling prices. Operating characteristics of many of our utilities are such that their earnings may tend downward, even though other industry, generally, may not be so affected. Utility companies have heavy investments in plant which continually require replacement for proper maintenance. These replacements and additions to plant to meet the continuing heavy public demand for service must be made at current cost levels —and these costs are higher than the average plant in service. This obviously contributes to increasing the plant investment and since the unit costs are higher acts to depress earnings.

Because of all these factors, I suspect we will be faced with continuing economic pressure for higher utility rates. We, in turn, should insist that utility companies continue to make the best use of their resources and thereby minimize further rate requirements.

Too often, I'm afraid, the average American takes for granted the "magic" of utility services at his finger tips. He cannot know, unless the story is told to him, the real importance to him of the institutions that make these contributions to his way of living. Yet, under democracy and free enterprise those very industries must have his understanding and support, if they are to be permitted to transform today's magic into tomorrow's commonplace.

Radioactivity Detectors via Telephone

Radio-active signals from radium in Reno, Nevada, were transmitted automatically and received in Washington, D. C., over long-distance telephone on February 7, 1955. It was the first public demonstration of a new long-range radiation "monitoring" system developed for the Atomic Energy Commission.

Developed by scientists of the National Bureau of Standards, the system was described by them as one which could enable a single operator to "obtain radiation data from stations located anywhere in the United States without leaving his desk."

AEC officials told a reporter they are using the system in connection with atomic tests in Nevada, but only in an area extending up to 250 miles in all directions from the test site. The objective is to cut down on the number of "mobile teams" once required to patrol the area to keep tabs on radio-active "fall-out." The system employs remotely controlled "detection stations," which, the NBS description indicated, can be scattered throughout the United States.

Competition: Our Best Bet For Gas Production

The recent report of the President's Committee on Energy Supplies and Resources Policy raised a serious question as to whether the federal government (through the Federal Power Commission) should attempt to exercise regulatory control over the hitherto highly competitive industrial operation of natural gas production and gathering. Here is an objective inquiry into the economic relationship of independent natural gas production to the public interest, particularly the consumer's interest.

By PHILIPP H. LOHMAN*

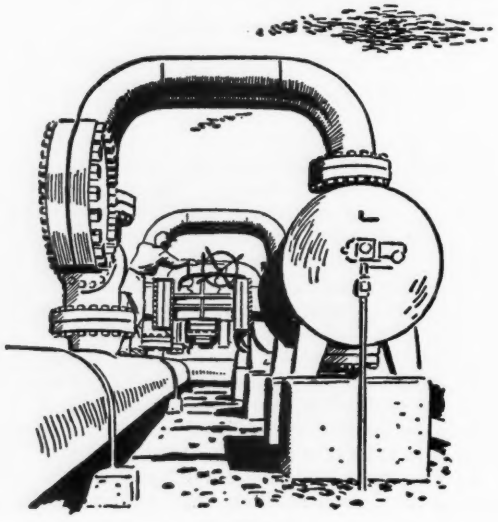
THE "Economic Report of the President," which Dwight D. Eisenhower sent to Congress last January, highlighted a set of principles that could be well described as a summation of American economic philosophy.

The report not only rejected various doctrinaire ideas about the rôle of government in our economy, but also offered its own positive "program for the future"—a program resting on these basic propositions:

(1) Competition, rather than directives from Washington, is as a rule the best way to organize our resources of man power, money, materials, and management for whatever we want to produce, distribute, consume.

(2) A free private enterprise economy can furnish the incomes required for economic advancement only when a feeling

*Professor and chairman, department of commerce and economics, University of Vermont, Burlington, Vermont. For additional personal note, see "Pages with the Editors."



of confidence pervades all groups. Otherwise, investors will not be willing to provide capital, nor businessmen and farmers to assume risks, nor workers to put their backs into their jobs, nor consumers to spend enough to sustain demand for goods.

(3) A climate favorable to economic expansion can exist only when government fosters an economic environment in which the initiatives of innovation are inseparable from the rewards of profit making.

(4) Above all, our private economy can flourish most effectively when government avoids any encroachment upon any business sector which discharges its obligations to society in a satisfactory manner.

Moreover, our incomparably high living standards derive primarily from two types of economic freedom, two sides of the same coin. As producers, our people are free to compete in the market, in selling their wares and commodities. As consumers, our people are free to choose what wares and commodities they want to buy.

SINCE the President's message of last January, a special committee appointed by the President has made its report on the proper respective spheres of federal and state regulation and free economic competition in the various phases of our major fuel industries—coal, oil, and natural gas. Needless to say, this special committee, composed of seven Cabinet officers,[1] confirmed the fundamental principle expressed by the President in his message, of reliance upon and confidence in our traditional American system of free competitive enterprise wherever possible.

This report, released February 26, 1955, definitely states "We believe the problems of natural gas regulation should be approached from the viewpoint of assuring adequate supplies and the discovery and development of additional reserves to supplement such supplies, in the interests of national defense, an expanding domestic economy, and reasonable prices to consumers."

The report goes on to say that in the interest of a sound fuel policy and protection of the other interests already mentioned, "We believe the federal government should not control the production, gathering, processing, or sale of natural gas prior to its entry into an interstate transmission line." It was noted in this report that the strictly interstate transmission phase of natural gas pipeline operations and the subsequent sale of gas for resale to distributing public utilities are normal public utility functions "and should be under the regulation of the Federal Power Commission."

CONTRADICTING the whole spirit of the President's Economic Report and the subsequent Cabinet report, and the economic philosophy affirmed by most Americans, are recent developments which require the Federal Power Commission to regulate the prices of the natural gas producers. They compete vigorously against each other to explore for gas, get it out of the ground, find customers for it. Yet the prices they receive are being placed under federal control, which is the situation derived from a 5-to-3 decision of the U. S. Supreme Court on June 7, 1954, in the case of Phillips Petroleum Co. *v.* State of

[1] The proper name of the group is the President's Advisory Committee on Energy Supplies and Resources Policy, and was composed of the Secretaries of State, Treasury, Defense, Justice, Interior, Commerce, and Labor, and the Director of the Office of Defense Mobilization as chairman.

Wisconsin et al,[2] which states that sales of natural gas by a producer to an interstate pipeline are subject to federal regulation.

In thus lowering the boom on this competitive segment of the natural gas industry, this decision has contravened, at every point, the Eisenhower administration's commitment to the values and virtues of free enterprise in which competition is the mainspring—a commitment shared not only by businessmen but also by the majority of Americans. This decision has, therefore, raised a question which transcends the immediate interests of the gas producers themselves. For if they are subject to price regulation by government, then so is everybody else who produces and sells a commodity under competitive conditions. To be consistent, to observe the rules of fair play, the government should also regulate the prices of the producers of other fuels such as oil and coal. The next logical extension would then be to regulate the prices of producers of shoes, textiles, copper, steel, bread, automobiles, and all other commodities that find their way into interstate commerce.

IT is for this reason that regulation of the gas producers' prices—which, as Justice Douglas pointed out in his dissenting opinion, is tantamount to control over every phase of the business—has become a litmus-paper test in terms of economic philosophy. This test divides those who believe that competition is a cornerstone of our economic freedom from those who believe that government fiat offers a superior method in work and wealth.

Certainly the regulation of natural gas production looms as a very real threat to any producer who vends his goods in interstate commerce.

The signs and portents of what regulation of a competitive industry can mean already have been made visible by what has happened in the sphere of natural gas production since the decision in the Phillips Case.

Apprehensive investors have begun to dump gas production securities. Bankers are concerned about the return on present loans to gas producers, and even more anxious about the practicality of similar loans in the future. Supplies of natural gas are being withheld from interstate markets. At least three new pipeline projects have been suspended. Existing contracts —indeed the very sanctity of contracts— have been put in jeopardy. Litigation over pricing policies has erupted.

All these and related events have not

[2] 347 US 672, 3 PUR3d 129.

¶ *"ON the record to date, only private enterprise, with all its defects, has been equal to the task of developing and allocating natural resources in a way that brings, relatively, the maximum benefit to the consumer—as our own living standards amply attest. Even more importantly, the operations of private enterprise, in accommodating itself to changing conditions, have preserved and strengthened political democracy and the dignity of the individual and his opportunity to live as a free man, rather than as a ward of the state."*

only impaired confidence, and disrupted the supply and demand equation. They have also converted an historic pattern of free competition into the frozen chaos that (except perhaps in the case of the "natural monopoly") we can always expect when the market decisions of private enterprise are replaced by government decree.

THERE may be those who accuse me of placing too much emphasis on the rôle of private enterprise. And it is true that the system, *per se,* is not sacrosanct. It has flaws. It is hardly perfect. Yet, on a comparative basis, it has proved its superior ability to make a vast quantity and variety of goods and services available at reasonable prices. It has done this more equitably and more efficiently than any other system yet devised by man.

On the record to date, only private enterprise, with all its defects, has been equal to the task of developing and allocating natural resources in a way that brings, relatively, the maximum benefit to the consumer—as our own living standards amply attest. Even more importantly, the operations of private enterprise, in accommodating itself to changing conditions, have preserved and strengthened political democracy and the dignity of the individual and his opportunity to live as a free man, rather than as a ward of the state. To those who insist upon less abstract proof of this thesis, let me briefly cite the history of the natural gas industry.

THIRTY years ago, no one thought very much about the industry. It was called "dormant" or "quiescent." Despite increased competition from electricity, public utilities continued to stick pretty much to the sale of manufactured gas for cooking and heating water. There were only a few industrial consumers for natural gas and about the only way people in general could obtain it was in communities where it came right out of their own back yards.

Where gas occurred with oil or where it was found when looking for oil, an almost insurmountable marketing problem arose. Some of it was sold at two cents or less per thousand cubic feet to whatever industries or cities were close to hand. A lot of it was flared or simply blown into the air in the fields. After all, why conserve anything that had no current or reasonably foreseeable value?

But then came the seamless and welded steel pipe. At the same time, trillions of cubic feet of natural gas were found in the Southwest and the Gulf region, a good deal of it in conjunction with oil exploration activities. The supply was clamoring for outlets. The pipeline provided transportation over hundreds of miles under high pressure for a commodity that used to be largely in the nuisance category.

TODAY, our pipeline mileage far exceeds that of our railroad tracks. Even during the depression, production of gas kept growing to meet growing demand. A free market, under competitive conditions, directed and channeled financial, technological, and human resources into the industry. As soon as the World War II materials controls were lifted, a big rush was on for this clean, convenient, dependable fuel.

No government ordained all this. Free men, working together through a free market system, gave the consumer what he wanted: a fuel cheaper than those

President's Cabinet Committee Opposed to Producer Controls

"In the production of natural gas it is important that sound conservation practices be continued. This area of conservation management is under the jurisdiction of state conservation commissions. In the interest of a sound fuels policy and the protection of the national defense and consumer interests by assuring such a continued exploration for and development of adequate reserves as to provide an adequate supply of natural gas, we believe the federal government should not control the production, gathering, processing, or sale of natural gas prior to its entry into an interstate transmission line."

—Excerpt *from the report of President Eisenhower's Advisory Committee on Energy Supplies and Resources Policy.*

formerly used, needing no storage, and always on tap.

Natural gas production is today about twice what it was in 1946—a remarkable gain in nine years. By their own free choice, 25,000,000 customers have given the industry their economic votes of confidence. At the moment, still more people want to become customers; in some places they are queued up, so to speak, waiting to have their homes connected with a gas pipeline. Too few of them realize, however, that the natural gas industry is an extraordinary fusion of regulation and vibrant competition. The consumer buys gas, like he buys electricity, from a public utility whose rates are set by a public service commission or some similar body. Some fifty interstate pipelines, also subject to close government regulation, transmit the gas to the local public utility distributor.

But out in the gas fields of the country, things are drastically different, as gas producers risk their own and other people's savings in the constant search for new sources of supply. Frequently, of course,

gas is found with oil or instead of oil. In any event, geophysical explorations and drilling take a lot of money. To sink a single well costs $100,000 on the average and can run up to as high as a million dollars. And there is only one out of nine chances that, in the "wildcatting" search for gas, explorers will find enough of it to make a profit. And in developing exploratory "pay zones" only about 40 per cent of the wells turn out to be successful—a ratio that underscores the economic hazards of gas production. Yet this producing segment of the gas industry supports, like an inverted pyramid, the entire transmission and distributing structure of the industry as a whole.

THERE are more than 5,000 independent gas producers—small, large, medium. They have always sold their gas for whatever prices they could get in the market place. Under the incentives of a profit-and-loss competitive system, American gas producers increased output 200 per cent in sixteen years. Over the same period, the price of natural gas to the average consumer went up only one-eleventh as much as living costs generally. Today, natural gas provides one-fourth of our country's energy resources. Under the ukases of a bureaucracy, it may be doubted if the public interest could, or can, be served anywhere near as capably.

Regulation of thousands of independent producers, each with his own set of complex problems, presents an incredible task, an Alice-in-Wonderland excursion. What are going to be the criteria for fair return on investment, on operating overhead, on entrepreneurial effort? What about the man who brings in a gas well when looking for oil—how is his gas to be assessed? And what about the firm that obtains oil and gas in a fluctuating ratio from the same field? Then, too, producer A may bring in a well at the very start and then go on to make another two or three strikes in a row. But producer B drills a half-dozen or more dry holes. In view of such diverse production costs, government regulation is not an economic device. It is merely an exercise in metaphysics.

Moreover, will investors risk capital—and many independent producers risk their entire existence—when the government via the Federal Power Commission now says "We shall tell you what you can charge for your gas—if and when you find it and produce it." What does this do to the zest and initiative of the enterpriser when he sees that he is throttled by a "certificate of public convenience and necessity" every time he wants to sell his gas?

AS a late comer to the U. S. economic scene, the gas business, outside of the gas distributing public utilities, was not regulated until 1938. The Natural Gas Act was passed in 1938 by the Congress with the apparent intent of regulating interstate pipelines, not the gas producer. Perhaps the language of this statute was vague in places. But it does contain one lucid section; namely,

> The provisions of this act . . . shall *not* apply to any other transportation or sale of natural gas or to the local distribution of natural gas . . . *or to the production or gathering of natural gas.* (Emphasis supplied.)

Certainly, it would seem that the act was never designed to apply to those segments of the natural gas business located at each

end of the interstate pipeline, neither to the local distributing utility at the terminal point nor to the producers and gatherers at the point of origin.

For years, the Federal Power Commission acted on the assumption that independent gas producers (organizations which neither own an interstate pipeline nor are connected with one) did not come under its jurisdiction in light of the terms of the 1938 act.

But during the 1940's, a process of regulatory erosion set in as the commission began to flirt with taking jurisdiction over gas production. In order to reassert its original intent, Congress in 1950 passed the Kerr Bill. It exempted from federal control the sales of independent gas producers to interstate pipelines. Mr. Truman vetoed the bill, much to the surprise of even some of his intimates, who had gained the impression that he favored it.

NEVERTHELESS, it looked as if once more the gas producers would continue to function within the framework of a free market. Since 1951, the Federal Power Commission continued to rule that the 1938 act excludes independent gas producers from federal regulation. But then the state of Wisconsin and others got into the act, bringing suit on grounds already discussed pro and con in the pages of the PUBLIC UTILITIES FORTNIGHTLY and which need not detain us here. Suffice it to say that the Supreme Court majority of five declared in effect that "the way we read the Natural Gas Act of 1938, the Federal Power Commission can regulate producers." This decision makes one think of the remark attributed to Oliver Wendell Holmes: "A shoemaker must stick to his last, and a judge must stick to the law. When we try to become legislators, we get into trouble."

Now everybody is in trouble—the consumer perhaps most of all. Today, more than ever before, we must increase gas production to bring our reserves up to a proper level for both civilian and defense purposes. Only the inducements of adequate financial reward for risk taking by the gas producers can insure tomorrow, as in the past, a supply of natural gas sufficient to meet the country's ever-enlarging requirements. Otherwise, too, the incentive to commit additional reserves to the national supply by means of long-term contracts will be strangled.

IF the Supreme Court's decision is not soon nullified by new congressional enactment, the nation's supply of natural gas will be jeopardized and much damage done to all concerned. The cost of gas to the consumer will go up far beyond the current adjustments to inflation's impact and rising demand if pipelines are not kept filled to capacity or near it. And no gas will ever come through pipelines that are never built. True, pipeline construction last year set a record. Due to the long-range character of such projects, this surge of construction may remain high throughout 1955. On the other hand, pipeline "starts" have been delayed or indefinitely postponed since the pipeliners have not been able to find enough producers able or willing to furnish them with the quantity of gas necessary to justify the prodigious investment that goes into building a pipeline and maintaining it. Surely, pipelines cannot be constructed unless long-term contracts can be made with gas producers. Their owners must show the investors that they will be in

business long enough to pay off the great input of capital funds.

Moreover, gas producers are aware of the declining value of the dollar. Like the rest of us they have—within a generation—lived through all the uncertainties of the depression of the 1930's, World War II, the postwar boom, the minor recession of 1949, the Korean War, and a second minor recession in 1954. They face, like the rest of us, the economic repercussions of the cold war and the lurking dangers of new inflation. They naturally wonder what their commodity will be worth years hence.

And so, as a result of the higgling and haggling of the market, special clauses have been written into long-term contracts between gas producers and the pipeliners—contracts which, on the whole, have worked out to everybody's advantage, pre-eminently that of the consumer. Now, however, the majority decision has thrown all these contractual obligations into confusion and legal conflict. One result is that during the last quarter of 1954, at the very time when the Dow-Jones industrial stock average surged through 1929 highs, natural gas securities went down or, at the very least, rose hardly at all.

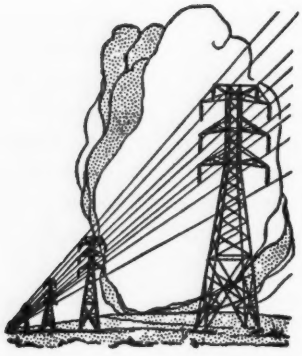
WHEN we add these and similar occurrences together, we find that the net effect of the Supreme Court's decision has been to retard a vast array of economic activities with a corresponding reduction of incomes and jobs with all that these could have contributed to the forward march of economic expansion.

More important than the effect of the present situation upon the individual consumer, or producer, or pipeliner, or public utility is something not yet widely perceived. It is that in removing competition and its handmaiden of economic freedom from natural gas production we ourselves, and not the Communists, are subverting our economic system from within.

THE absence of competition in England and France has impeded, to an overwhelming extent, their rate of economic growth during the past forty years. Today, Britain's rate of economic growth is less than half of ours, and France's less than three-fifths. Their propensity to transform a competitive enterprise into a synthetic monopoly, or cartel, or a nationalized undertaking, has been among their major economic blunders. In consequence, they—and other industrial nations which have followed their example—are plagued by a lag in productivity, by lack of technological innovation, by deficiency in managerial drive and daring. These are the earmarks of any company or any industry (again with the exception of the legitimate and legal monopoly) that is no longer exposed to the chill, bracing air of competition.

The statistics of this kind of economic operation lead invariably to more and more statism. When the competitive process, in price, product, or promotion, is no longer the range finder and pace setter in the use of our resources, human and material, the alternative soon or late will be the fiat and fixity of the planning board.

Federal regulation of natural gas production is a fateful step in that direction.



Electric Power Supply In Great Britain

PART II.

The recent British "White Paper" shows that England is definitely in the race to perfect a practical commercial nuclear reactor to develop electric energy from atom power. This second part of a 2-part series shows that economic conditions following the war and the need of exports have seriously delayed the British Electricity Authority's program in the first five years of nationalization.

By ERNEST R. ABRAMS*

ECONOMIC conditions following the war and the need of exports seriously delayed BEA's construction program in the first five years of nationalization, and will continue to do so for the next few years. The sizes of the annual plant construction scheduled by the authority for future years have been tempered by the amount of generating equipment the manufacturers will be permitted to supply. Estimates of the amount of new capacity to be installed in each calendar year, with the smaller amount indicating what may be expected with confidence and the larger amount the deliveries that might be received in the absence of governmental interference, in thousands of kilowatts, are:

Calendar Year	*M-Kilowatts*
1954	1,400-1,600
1955	1,500-1,700
1956	1,600-1,800
1957	1,700-1,900

However, the government decided for economic reasons to limit new plant construction to 1,550,000 kilowatts in the 1953-55 years, which has since been extended to the 1956-59 years.

ANOTHER hurdle in the path of plant expansion is the borrowing capacity of the BEA. Under the 1947 act, its total

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borrowing powers were limited to $1,974,000,000, which included "severance compensation" or the amounts paid former owners for their properties. Of this total, $1,470,000,000 had already been consumed through stock issues, leaving unexercised borrowing powers of $504,000,000, which had already been partly hypothecated by temporary bank borrowings, and it was estimated that not more than $364,000,000 of borrowing powers would remain unexercised at the close of the 1953 calendar year. However, Parliament could amend the 1947 act to increase the limit on borrowing powers if the need arose.

LIKE electric utilities in this country, the BEA and the area boards have been plagued by rising costs of equipment and plant construction. At the time nationalization was accomplished, the average cost of newly installed generating capacity was between two and three times as much as before the war and this increase has continued since vesting day. BEA's officials estimate that to build a generating plant of 120,000-kilowatt capacity at prices ruling in March, 1952, would have cost from a quarter to a third more than if construction had started in March, 1948. In addition, operating costs have risen substantially since vesting day, particularly for fuel, transportation, wages, and salaries. Both fuel and transport rates rose nearly 6 per cent in the 1952-53 year and added a combined $15,100,000 to the delivered cost of coal, while increased wage and salary awards added another $9,800,000 to operating costs during the year.

Yet the average price per kilowatt-hour of electricity sold to consumers, the BEA notes with pride, was *only 24.9 per cent above* the prewar average.

A SCHEME is now under way to set up a hydroelectric board in Wales similar to that operating in the north of Scotland. The North Wales Hydro-Electric Power Bill, promoted by the authority with the consent of the Minister of Fuel and Power, received Royal Assent on August 1, 1952, but in view of national restrictions on capital investment it was decided to defer the promotion of another bill to authorize two further schemes in Wales. The North Wales Hydro-Electric Power Bill authorized extension of the catchment areas of existing hydroelectric plants to increase their generating capacity by 10,000 kilowatts and annual output by 13,000,000 kilowatt-hours. In addition, a joint committee appointed by the authority and Electricite de France has begun to investigate the proposed submarine cable connecting the electric supplies of Great Britain and France. The construction of a 120,000-volt cable connection was found feasible and experimental work has been started.

BECAUSE demand for electric energy in Great Britain has exceeded the capacity of generating plants in recent years, the BEA adopted load spreading. In its report published in July, 1952, the electricity subcommittee of the joint consultative committee of the National Advisory Council of Industry (not even the New Deal could cook up a name like that), considered load spreading for industrial and commercial consumers and summarized its conclusions for the winter of 1952-53 as follows:

(a) The estimated increase in gen-

erating capacity will leave a peak-hour deficit next winter.

(b) Load-spreading arrangements for industrial and larger commercial consumers will again be necessary.

(c) Peak hours would be from 8 A.M. to 12 noon and from 4 to 5.30 P.M., Monday to Friday.

(d) Industrial consumers and commercial consumers with a load of over 20 kilowatts should strive to reduce the peak load by at least 10 per cent during those hours from November 1, 1952, to January 31, 1953.

(e) The problem is largely a regional one and regional boards should have discretion to vary this percentage in the light of local and regional conditions.

(f) A staggering of work hours should not be necessary to achieve this reduction, but maximum assistance should be afforded by the use of private generating plants.

(g) Domestic and smaller commercial consumers should continue to play their part in economies at the times and period stipulated.

THE adoption of this arrangement by the authority resulted in an estimated reduction in demand of 200,000 kilowatts, as compared with the reduction of 550,000 kilowatts required in the previous winter. In carrying out the scheme, the authority utilized the facilities of the British Broadcasting Corporation to give warnings of possible load shedding. The warnings were of two types: (1) general warnings broadcast before news bulletins, when the estimated plant/load situation for a particular peak period was such that the shedding of load was expected. There were four such warnings during the winter. (2) Warnings of imminent disconnection of supplies in specific areas, broadcast by interrupting the light program as required between 7.30 A.M. and 12.30 P.M. and between 3 and 6 P.M. The warnings originated with the engineer on duty at National Control, who alone could visualize the minute-to-minute operating conditions on the system as a whole. These facilities were used on six occasions during the year.

The maximum reduction of the national load at any time came on December 16, 1952, and was of the order of 1,085,000 kilowatts, equivalent to 7.4 per cent of the total potential demand on the system at the time.

AT the close of the fiscal years 1952 and 1953, the BEA area board had those customers shown in the table below, with consumers supplied under a combination domestic and commercial rate al-

ELECTRIC CONSUMERS

	March 31, 1952	*March 31, 1953*	*% Change*
Industrial	152,582	157,713	+2.7
Commercial	1,356,641	1,395,159	+2.1
Farm	123,732	134,429	+8.6
Domestic	11,811,505	12,203,284	+3.3
Traction	73	70	—4.1
Public Lighting	4,123	4,105	—0.4
Total Consumers	13,448,656	13,894,760	+3.2

located on an appropriate basis by the area boards concerned.

Sales of energy to these consumers in millions of kilowatt-hours are shown in the table on page 370. The increase of 3.7 per cent in total sales in 1952-53 compares with 12.3 per cent in 1950-51 and 8.2 per cent in 1951-52.

The authority's wholesale rate for power supplied to the area boards comprises a fixed charge per kilowatt of maximum demand and a commodity charge per kilowatt-hour, which varies with the cost of fuel in each area. The rate for 1952-53 was similar to that of the previous year except for an increase in the demand charge of 42 cents from $11.55 to $11.97 per kilowatt. This increase was necessary to cover increased capital charges on new plant and other increased costs which were partly offset by economies in operation resulting in the main from the installation of more efficient generating equipment. The wholesale rate for 1953-54 was the same as for 1952-53.

The average rate received by the authority was 1.463 cents per kilowatt-hour, which was 7.5 per cent above the 1951-52 average, 15.7 per cent above that of 1947-48, and 24.9 per cent above that of 1938-39.

The authority noted that the average price increase for electricity since the war was very much less than the price increases for practically all other commodities and services, and far below the increases which have been paid by the authority and the area boards for plant and equipment, engineering works, buildings, coal, materials and other goods, and services.

LORD Citrine, chairman of the BEA, made the following statement in the December, 1953, electricity supplement of the *London Times:*

> The policy of the British Electricity Authority, while never losing sight of the need for a balanced development of the supply system as a whole, is to accelerate the pace of rural electrification as much as possible. It is being done on the assumption that adequate capital resources will be forthcoming and in the knowledge of the fact that the farther afield development spreads the less remunerative rural electrification becomes, particularly in the early years. The boards have decided in principle to try to meet the economic consequences of the policy from their own resources, as far as possible. The alternative is to seek a government subsidy, a policy which the boards profoundly dislike.

On March 31, 1953, a total of 134,429 farms were being served with central station electricity in Great Britain. Prior to nationalization of the electric supply industry, there were 85,555 farms being served which the BEA estimates was accomplished at an average rate of 3,000 a year. Since vesting day, farm electrification has progressed as follows:

Period	*Farms Connected*
1948-49	9,118
1949-50	9,357
1950-51	9,940
1951-52	9,875
1952-53	10,584

THE total number of farms connected represents only some 45 per cent of all farms and, at the present rate of progress, it would take nearly eighteen years to connect all farms. However, the British government recently announced its desire to see a more rapid extension of electric service to rural areas and, as evidence of

SALES TO CONSUMER CLASSES

	1947-48	1951-52	1952-53	% Change 1947-48	% Change 1952-53
Industrial	17,573	25,242	25,879	+ 47.3	+ 2.5
Commercial	3,840	6,754	7,554	+ 96.7	+11.8
Farm	248	570	674	+171.8	+18.2
Domestic	12,305	15,984	16,260	+ 32.1	+ 1.7
Rail Traction	767	914	933	+ 21.6	+ 2.1
Street Traction	577	496	467	— 19.1	— 5.8
Public Lighting	189	456	497	+163.0	+ 9.0
Total Sales	35,499	50,416	52,264	+ 47.2	+ 3.7

its sincerity, has relaxed capital restrictions on rural construction. As a result the former restrictions no longer are a limiting factor in rural line extension.

THERE has been considerable criticism by many area boards, perhaps with some justification in a few regions, of the low average annual consumption per rural customer. Much of this criticism has been directed at farm consumers on the ground that once their premises have been connected they might reasonably be expected to make the fullest use of the supply for all heating and motive power in the farm buildings. The British Electricity Authority notes in its 1952-53 annual report, however, that there is ample evidence that farmers do progress over a period of experience to a full use of the power supply available to them. But the area boards, anxious for added revenues, are primarily concerned with immediate and sharp increases in farm consumption.

ON the whole, nationalization of electric supply in Great Britain appears to be making substantial progress. Although service is still unreliable according to U. S. standards, it is getting better and promises to show real improvement over the next few years. Of course, realistic rate increases have been necessary to bring this about. The socialized industry is definitely paying its way and is not a taxpayers' subsidy. Although it is no more possible to please all the British than all the Americans, the new ownership of electric supply and distribution agencies appears to serve the needs of most consumers, except possibly those industrial and commercial users who are disconnected at times of

ELECTRIC POWER SUPPLY IN GREAT BRITAIN

	1948-49	*1949-50*	*1950-51*	*1951-52*	*1952-53*
Breakdown	6.4%	5.8%	7.6%	6.4%	7.4%
Overhaul	4.1	3.2	3.1	3.0	3.1
Other Causes	3.0	2.7	4.3	3.1	3.1
Total Loss	13.5%	11.7%	15.0%	12.5%	13.6%

peak demand. And the outlook for improved reliability of service and adequacy of electric supply is encouraging.

Consumption of energy in 1952-53 was 50 per cent higher than in 1947-48 and two and one half times higher than at the close of the war. Present consumption is at the rate of 1,100 kilowatt-hours per capita, compared with 420 kilowatt-hours per capita in 1937-38. The shortage of generating capacity, resulting from the need of supplying the export market before local installations could be made, has brought on load shedding and disconnection of industrial and large commercial users during periods of peak demand and, at the end of March, 1953, British industry placed only one-third of an electrical horsepower at the disposal of each worker. But Great Britain is coming out of its troubles, rationing of foodstuffs has stopped and electric supply should be ample by the end of 1959.

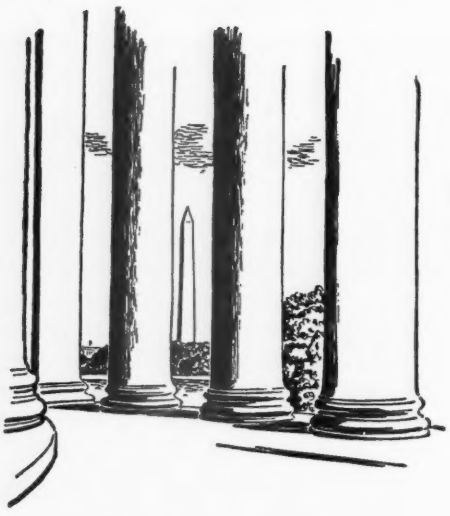
BASED on the experience of the privately and publicly owned electric properties taken over on April 1, 1948, the British Electricity Authority and the area boards were faced with a deficit of some $19,600,000 during their first fiscal year, which forced an increase in all rates. Average realization in 1952-53 was 1.495 cents per kilowatt-hour, compared with 1.311 cents five years earlier and 1.177 cents before the war.

Net income of the combined British Electricity Authority and the 14 area boards in 1952-53 was $20,300,000 after paying 4.8 per cent of operating revenues in lieu of taxes and 9.8 per cent of gross revenues in full interest on all the funds invested in its facilities. During the first five years of nationalization, net income after taxes and interest totaled $79,240,000, which would indicate that the nationalized industry is paying its way.

Due to the fact that more than 40 per cent of both generating and boiler capacity is twenty-five years old or more, resulting from the governmental requirement that equipment manufacturers sell their products abroad to build up foreign exchange, the nationalized industry has been plagued by loss of capacity through breakdown of plant and other causes during periods of peak demand. The proportion of generating capacity out of service from Monday to Friday in December and January of the five fiscal years is shown in the table above.

However, with the volume of generating capacity scheduled for installation through 1959, this handicap should be largely overcome.

The number of total customers served on March 31, 1953, exceeded 13,884,000, which was 2,170,000 or 19 per cent more than on vesting day. Included in that total was 45 per cent of all farms in Great Britain. The rate increases, however, amounted to 15.7 per cent in the first five years of nationalization.



Washington and the Utilities

Gas Bill Politics

THE coming battle in Congress over whether the Natural Gas Act should be amended so as to exempt the independent producers is shaping up along lines roughly similar to the war between the states. From the South and Southwest comes support for the various bills which would annul the U. S. Supreme Court's decision in the Phillips Petroleum Company Case of last June—support from both Republicans and Democrats. From the North and Middlewest bipartisan opposition is forming behind the Illinois Democratic leadership of Senator Douglas and Representative Yates. Wisconsin Republican Representative Davis seems to be giving bipartisan coloration to this opposition.

A good many states remain to be heard from north and south of the Mason-Dixon Line, and there are splits indicated in the delegations of some states, such as Tennessee. All of which may explain the rather cautious statements which have been coming from administration sources on this legislative hot potato. First, there was the White House release of the President's Cabinet Committee on Energy Supplies and Resources Policy. (For text, see page 387.)

This report, recommending the end of FPC jurisdiction over the production, gathering, processing, or sale of natural gas prior to its entry into an interstate transmission line, brought joy and comfort to the oil- and gas-producing industry and its allies. It was hailed as a probable index to President Eisenhower's own thinking on the subject, or at least as the administration's unofficial position. On the strength of it, proponents of gas producer exemption sought to mobilize their support behind ranking members of the House Interstate and Foreign Commerce Committee on both sides of the aisle. They already had the sympathetic ear of the chairman, Representative Priest (Democrat, Tennessee), who had slated hearings for late March.

Representative Harris (Arkansas), Democratic ranking member, lent his name to the bill (HR 4560), but the ranking minority member, Representative Wolverton (Republican, New Jersey), did not. It was necessary to get the second minority ranking member, Representative Hinshaw

(Republican, California), from a producing state, to sponsor a companion measure (HR 4675). The big push will be mounted back of these bipartisan Harris-Hinshaw bills.

THEN came word that Representative Davis had received a letter from White House sources pointing out that the Cabinet committee's report was not necessarily an index to the President's attitude, but was strictly an advisory document. Davis was told by White House spokesmen that President Eisenhower would be happy to hear from representatives of gas consumers before he takes a stand on such legislation. The letter was signed by Gerald D. Morgan, special counsel to the President, in reply to an inquiry from Representative Davis. Morgan said "These recommendations do not, however, represent recommendations of the President. They are merely recommendations of the advisory group to the President."

What does this backing and filling mean? It probably means that presidential political advisers see in the controversial gas legislation a double-edged sword. If Congress passes the Harris-Hinshaw bills, President Eisenhower will have to make an important decision, just as former President Truman did in 1950 when he vetoed the old Kerr Bill. If Eisenhower signs such a bill, the Democrats in the northern cities having union constituencies will be tempted to harp on the utility giveaway theme, which they have been working over so heatedly in the electric utility field, on such items as the Dixon-Yates contract, Hell's Canyon, etc.

Anticipating this gambit, Representative Halleck (Republican, Indiana), assistant House Minority Leader, arose in the House to put the burden of procedure on the Democrats for the fate of any gas legislation. Halleck expressed a personal conviction that federal regulation should be restricted to interstate pipelines, as he said was the intention of the Natural Gas Act before it was "misinterpreted" by the U. S. Supreme Court in its Phillips Petroleum Company decision of last June. On the other hand, the Republican party leader denied charges made by Senator Douglas and other Democrats that enactment of legislation exempting producers would be a "Republican giveaway." Halleck reminded the House majority members that if such legislation were so labeled, the initiating responsibility would lie with the Democrats.

ON the other hand, if President Eisenhower were to veto such legislation, following the example of his predecessor, there would be a hot time in Texas, California, Louisiana, and other areas where the Eisenhower-Democratic movement paid off to such good effect in the elections of 1952. The consensus of Washington observers is that release of the Cabinet committee report at least indicates President Eisenhower is not likely to veto such a bill if it reaches his desk.

But, in the light of the various and sensitive political ramifications noted above, it is small wonder that Republican party leaders would be disposed to bear up very cheerfully if the bill should suffer a casualty somewhere along the line in Congress and never reach the President's desk for a decision. Hence the probability is that the administration's position, as long as the bills are before Congress, will be to keep hands off, and leave individual Congressmen free to vote as their respective constituencies may suggest.

To complicate matters, there is the distinct possibility of a rift in the ranks of the supporters of gas producer exemption legislation. The Harris-Hinshaw bills contain a provision, ostensibly designed to

protect consumers, which requires the FPC to allow pipeline companies to charge as operating expenses (for gas purchased under contract) "only such market price" as the commission may consider is reasonable, in view of the field production and other component factors. Some of the pipeline companies, which have been among the stoutest allies of producer exemption legislation, were quite unhappy about this. They visualized being caught in the middle, between allowable expenses and contract prices calling for wholesale supply payments greater than the expenses allowed. If such situations were to develop, the pipeline companies' stockholders would be left holding the bag for the difference.

The Hell's Canyon Push

WHEN nearly a third of the members of the entire Senate puts their names on a bill as "cosponsors," the effect is likely to impress the uninitiated. That is the purpose of such stampede drives. It is not a new pattern. A somewhat lesser number of sponsors used to appear on the old Missouri Authority bills, which never got out of committee, even during Democratic administrations.

To the veteran observer, such power plays in the introduction of legislation are actually a telltale confession of weakness. It is something like a bridge player leading with his aces, because he has little else in reserve. Such, at any rate, is the cautious estimate of the latest manuever of the public power bloc in the Senate in filing a bill authorizing the federal government to construct a single high dam on the Snake river. The bill (S 1333) was signed by twenty-seven Democrats and two Republicans.

There is a fair chance that it will reach a vote this year (if the proponents decide to risk a floor vote) because the bill is being handled by a friendly Senate Interior Affairs Committee, headed by one of its cosponsors, Senator Murray (Democrat, Montana). If passed, the bill would take away from the FPC any further discretion in granting hydro licenses in the Snake river area to nonfederal applicants, such as the pending applications by the Idaho Power Company.

THE actual objective of the Senate power bloc may well be to accentuate public power as a partisan issue, since most Republican Senators are likely to follow the administration's lead. The result may affect close elections in the northwest area next year. Democratic political strategists may be seeking to maneuver the popular Republican governors of Oregon and Washington—who may be picked by the GOP to oust incumbent Democratic Senators Morse and Magnuson—into a position of opposition to public power development if a close fight develops on the bill and President Eisenhower is obliged to veto it.

The Democratic sponsors of the Hell's Canyon bill are: Anderson (New Mexico); Chavez (New Mexico); Clements (Kentucky); Douglas (Illinois); Fulbright (Arkansas); Gore (Tennessee); Green (Rhode Island); Hennings (Missouri); Hill (Alabama); Humphrey (Minnesota); Jackson (Washington); Johnston (South Carolina); Kefauver (Tennessee); Kerr (Oklahoma); Kilgore (West Virginia); Lehman (New York); Magnuson (Washington); Mansfield (Montana); McNamara (Michigan); Morse (Oregon); Neely (West Virginia); Neuberger (Oregon); O'Mahoney (Wyoming); Scott (North Carolina); Sparkman (Alabama); and Symington (Missouri). The two Republicans were Langer (North Dakota) and Young (North Dakota).

Wire and Wireless Communication

Hoover Commission Reports On REA

THE Hoover Commission's long-awaited report to Congress on "Lending Agencies" was finally released earlier this month. The government's lending agencies, so far as the Hoover Commission is concerned, fall into two categories: (1) those which have served their purpose and should be liquidated, and (2) those which should be "mutualized," or be otherwise reorganized to make them self-supporting, to assure better management and to merge them into the private enterprise system. The commission recommends outright liquidation of twelve Production Credit corporations, Agricultural Marketing Act Revolving Fund, Federal Farm Mortgage Corporation, and Loans for College Housing. Those agencies the commission believes should be reorganized on a self-supporting basis, include Banks for Co-operatives, Federal Housing Administration, Federal Intermediate Credit banks, Federal National Mortgage Association, and Rural Electrification Administration.

The following is an extract from the full report of that section dealing with REA:

The Rural Electrification Administration was created by Executive Order in 1935, but was made statutory by Congress in 1936 with several subsequent amendments.

The principal purposes are to furnish financing for electrical and telephone services for persons in rural areas especially to farmers. The agency operates by making direct loans to local co-operatives of farmers and some other public agencies and private companies. . . .

Of the . . . approved loan total, $2,443,754,000 had been advanced to June 30, 1954. Further authorizations made through fiscal year 1954 will bring the total of federal loans for rural electrification to about $2,933,000,000.

In another program, the Rural Electrification Administration, through June 30, 1954, had approved telephone loans of $184,579,000 of which $60,102,000 had been advanced to borrowing co-operatives.

It is estimated that approved electrification loans will provide for 1,387,441 miles of line and related facilities to serve 4,367,045 consumers from a generating capacity of about 1,200,000 kilowatts of which 826,000 kilowatts have already been completed, which is about 1.25 per cent of the total gen-

erating capacity in the United States.

On June 30, 1954, this agency owed the Treasury for advances $2,091,991,000 with further authorizations of $600,237,000. In the meantime the agency had received appropriations of $226,213,000 for capital purposes.

The interest charged by the Treasury for advances may not exceed 2 per cent. The actual rate of interest now being paid by the Treasury on comparable long-term loans is about 3 per cent. Interest payable by the co-operatives and other borrowers to the Rural Electrification Administration is also a flat 2 per cent rate and is not payable during the first five years; therefore, the full possible interest returns cannot be received.

The administrative expenses of the Rural Electrification Administration are met by congressional appropriations which from inception to June, 1953, were a total of $78,667,000. In fiscal year 1954 the agency received income, mainly interest on loans, of $41,885,000. Administrative expenses of $7,284,000 plus interest on funds borrowed from the Treasury resulted in a net loss of $5,480,000 for fiscal year 1954.

The financial plans developed for the borrowers of the Rural Electrification Administration assumed that the physical plant once financed would require little if any further change and that earnings would be used to meet debt service charges. However, these plans have been found to be inadequate because an electric distribution system constantly requires replacement of parts of the system, and increased usage necessitates an increase in the capacity of the system.

The additional financial demands for these purposes by the co-operatives have been met for the most part from additional Rural Electrification Administration loans.

The financial setup of the co-operatives does not make adequate provision for such rates for power or telephone service to enable them adequately to build up reserves, and provide for extensions or replacements.

Under this method of financing the government has subsidized the sale of electric power to the members of the co-operative associations at considerably less than its economic cost, the subsidies being provided in the following ways:

(1) The charging of interest at 2 per cent per annum which is about one percentage point less than the interest which the Treasury must pay on long-term issues to provide the money.

(2) The granting of the 5-year moratorium period with a delayed payment of interest which results in an effective rate of return of even less than 2 per cent.

(3) Granting exemption from all federal taxes (in some states these bodies are exempt from all or some local taxes).

(4) Providing the administrative expenses which in the past five years have averaged about $7,750,000 annually from federal funds.

Possibly some portions of these subsidies are justifiable in the early stages of the initial extension of electric service in a given rural area. Today, even omitting tax exemption, the aggregate of these subsidies is considerable.

It has been estimated that the growth of usage of electricity will cause a doubling of the investment of the electric industry in the next twelve years. If this same growth occurs in the electric co-

operatives, the loans required from the Rural Electrification Administration under the present method of financing will also double without considering further territorial extensions. By June 30, 1954, 92.3 per cent of all farms were electrified; 54 per cent are supplied by agencies financed by the Rural Electrification Administration, and 46 per cent are supplied by privately owned utility companies.

In view of the great advance made in farm electrification, it is our belief that the time has arrived for the reorganization of the Rural Electrification Administration into a self-supporting institution securing its own finance from private sources in a manner similar to that of the other agencies discussed previously. Moreover, the operations of Rural Electrification should be made subject to the Government Corporation Control Act in order to secure the advantages of more efficient organization under that act.

Recommendation No. 36

(a) That the Rural Electrification Administration be reorganized on a self-supporting basis;

(b) secure its financing from private sources; and

(c) as reorganized, be made subject to the Government Corporation Control Act.

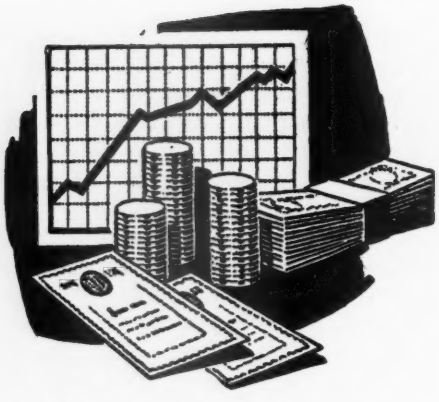
THE full commission, headed by former President Hoover, included Attorney General Brownell, former Postmaster General James A. Farley, and Representative Holifield (Democrat, California). The first two were not entirely persuaded to share the commission's views on REA. Holifield, in a separate statement, seemed to dissent from the entire report. Other members of the commission (who apparently concurred) included Senator McClellan (Democrat, Arkansas); former Senator Ferguson (Republican, Michigan); Representative Clarence J. Brown (Republican, Ohio); Defense Mobilization Director Arthur S. Flemming; Joseph P. Kennedy, former Ambassador to Great Britain; Robert G. Storey, former president of the American Bar Association; Solomon C. Hollister, civil engineer; and Sidney A. Mitchell, prominent banker.

Attorney General Brownell said he did not believe there has been sufficient study to determine the effect which such a recommendation would have on REA. Farley thought the report failed to give adequate reasons for recommending changes in organizations such as REA, "which have served a good purpose, especially in fields where private enterprise in the past has failed to meet the needs." Representative Holifield acknowledged that a few of the report's recommendations might have some merit.

But he took the position that Congress created the Hoover Commission to study present organizations and operations of the executive branch, and that Congress did not want the commission to give it advice on public policies of every sort.

FCC Recommends Changes In Communications Act

FOUR changes in the Communications Act have been recommended to Congress by the FCC. All of them relate to the FCC's regulatory authority over communications common carriers (telephone and telegraph companies). FCC thinks the amendments to the act, if enacted, would relieve both the commission and those it regulates of certain administrative burdens without weakening the FCC's basic jurisdiction.



Financial News and Comment

By OWEN ELY

Electric Power Survey, 1954–57

THE sixteenth semiannual electric power survey has been prepared by a committee of the Edison Electric Institute, headed by Arthur S. Griswold of the Detroit Edison Company. Following is a summary of some major findings of the survey:

Capability of all electric power systems of the United States (private and public) was estimated at 104,000,000 kilowatts as of December 31, 1954, and was forecast at 129,000,000 kilowatts by the end of 1957, a 3-year gain of about 24 per cent.

The actual or forecasted capability figures for 1952-57, as compared with indicated peak loads, are shown in the table on page 379.

The estimates indicate a declining rate of gain both for capability and peak load, the percentage gain for each year over the previous year being as follows:

	Capability Scheduled	*Peak Load*
1953	13%	8%
1954	13	11
1955	12	10
1956	6	7
1957	5	7

Figures for the individual regions in the United States continue to differ rather widely. Thus, in 1957 Region III (the Southeast, including TVA) will still have an estimated gross margin of only 9 per cent under adverse hydro conditions, or about the same as in 1954; with median hydro conditions it will be 11 per cent. The western division of Region VII (states of Washington and Oregon) will also continue dependent on steam power under adverse hydro conditions, and its gross margin of capability will only be 2 per cent in 1957 compared with a deficit of 2 per cent in 1954; with normal water, however, the margin will be 19 per cent compared with 10 per cent in 1954. Of course there is a considerable amount of interruptible industrial sales included in the peak load for this area, and all of the noninterruptible load (principally residential and commercial) can be carried without difficulty. This fact, together with the availability of some power from the east division, probably explains why no

DEPARTMENT INDEX

effort is being made to develop a greater margin of steam power for stand-by purposes.

THE eastern section of this area, including Utah, Idaho, and Montana, is not much affected by droughts, and the margin of capability is figured at 31 per cent in 1957 compared with 22 per cent in 1954, regardless of rainfall. If it were not for the difficult terrain, it would seem worth while to attempt to construct additional interconnections between these two areas so as to equalize the margin of capability under drought conditions. There are good interconnections in the North, but power from Utah and Idaho could probably reach Washington and Oregon by a much shorter route if an added interconnection was built over a comparatively short distance in northern Oregon.

The regional energy outputs for 1954 were in most cases lower than those which had been forecast in the April, 1954, survey, and the U. S. total was reduced over 2 per cent. However, Regions I and V (the Northeast and the South Central) showed increases. Forecasts of electric output for future years showed little change from the earlier survey.

The number of scheduled additions to generating capacity is divided between steam and hydro over the 4-year period 1954-57 as follows:

	Kilowatts	*Per Cent Of Total*
Steam	32,992,000	89%
Hydro	4,136,000	11
Total	37,059,000	100%

This seems to indicate a declining trend in the growth of hydro power, in relation to total generating capability.

TOTAL shipments of generators in 1954 were estimated at 12,274,000 kilowatts compared with 11,446,000 kilowatts in 1953. Based on scheduled shipments, the 1955 gain will be 10,909,000 kilowatts. In 1956 the figure drops to 4,811,000 kilowatts and in 1957 to 1,666,000 kilowatts. The schedule for 1954 production of generators was lower as of October 1st than had been scheduled last April by about 1,270,000 kilowatts, this amount having been deferred until 1955 at customers' request; 1955 is thus correspondingly larger than as reported earlier. Orders for later years have increased somewhat as a result of new orders placed since last April.

Scheduled additions to generating capacity (beginning in 1955) include about 1,085,000 kilowatt steam units for Ohio Valley Electric Corporation and 3,300,000 kilowatts for TVA. (The latter will also install 75,000-kilowatt hydro.) This is in addition to the 1,500,000-kilowatt steam capacity and 122,000-kilowatt hydro added last year by TVA. Electric

	Capability Scheduled Million KW		*Peak Load Mill. KW*	*% Gross Margin with*	
	Median Hydro	*Adverse Hydro*		*Median Hydro*	*Adverse Hydro*
1952 Actual*	81	—	73	12%	—
1953 " *	92	—	79	18	—
1954 Est.	104	103	87	19	17%
1955 "	117	115	96	22	19
1956 "	123	121	102	21	18
1957 " **	129	127	109	19	16

* 1952 and 1953 represent actual operating data; 1952 in the western division of Region VII hydro conditions were adverse and load was heavily curtailed.

** Scheduling of 1957 capability additions has not been completed; and figures are preliminary for that year.

Energy, Inc., installed about 312,000-kilowatt steam units last year and expects to put in a similar amount this year. Of the 37,059,000 kilowatts installed or scheduled for installation in the years 1954-57, ownership will be as follows, as compared with the 1953 situation:

	1953 Capacity	*Scheduled Additions To Capacity During 1954-57*
Investor-owned	78%	72%
Governmental Agencies—Fed.	12	21
Nonfederal	10	7
Total	100%	100%

DESPITE all the earlier agitation in favor of the development of federal hydro power in New England, only negligible capacity is scheduled for construction by governmental agencies in Region I and none of this will be federal. (Later, of course, the big Niagara and St. Lawrence projects will enter the picture.) In the East Central region a moderate amount of public power (no federal) is scheduled. In the Southeast, however, federal projects, including TVA and the Army Engineers, plus some nonfederal construction, make a total of 5,725,000 kilowatts compared with only 3,190,000 kilowatts investor-owned construction; most of this TVA work will be completed by 1955, with the remainder in 1956. In the North Central region public power projects amount to about 10 per cent of investor-owned, with no federal power projected. In the South Central region combined federal and local projects also approximate 10 per cent of investor-owned. In the West Central region, however, there are some important projects by the Army Engineers, and total public power aggregates 1,050,000, or nearly five times as much as investor-owned projects.

In the Northwest there is a still greater disparity, with federal and local public power projects totaling 1,739,000 kilowatts compared with only 278,000 kilowatts planned by investor-owned companies; however, private utility companies in the Northwest are planning a number of big hydro developments which will not materialize until later years. In the Pacific Southwest the situation is reversed: Pacific Gas and Electric has a large number of big steam plants and several smaller hydro units scheduled. Southern California Edison and San Diego Gas & Electric, as well as the Arizona utilities, also have substantial power projects planned. In this area federal projects total only 176,000 kilowatts and local public power 700,000 kilowatts, compared with 2,178,000 for the investor-owned utilities.

CURRENT YIELD YARDSTICKS

	*March 11, 1955**	*1954-55 Range*		*1953 Range*	
		High	*Low*	*High*	*Low*
U. S. Long-term Bonds—Taxable	2.71%	2.75%	2.41%	3.15%	2.70%
Utility Bonds—Aaa	3.06	3.13	2.86	3.43	3.01
Aa	3.09	3.19	2.92	3.59	3.07
A	3.15	3.37	3.11	3.72	3.23
Baa	3.38	3.72	3.37	3.94	3.50
Utility Preferred Stocks—High-grade	3.96	4.14	3.85	4.45	4.01
Medium-grade	4.27	4.51	4.17	4.87	4.43
24 Electric Utility Common Stocks	4.51	5.23	4.37	5.72	5.01
30 Gas Utility Common Stocks	4.50	5.22	4.37	5.66	4.74

*Approximate date.

Latest available Moody indices are used for utility bonds and stocks; Standard & Poor's index for government bonds.

1955 Gas-electric Utility Construction to Exceed 1954

As indicated in the electric power survey analyzed above, the industry is expected to install nearly 1,000,000 kilowatts more capacity in 1955 than in 1954. This seems to be confirmed by a recent SEC release on business capital expenditures in 1955, which indicates that while industrial and railroad companies will probably spend less this year on construction, electric and gas utilities expect to spend $4,384,000,000, compared with $4,219,000,000 in 1954 and $4,552,000,000 in 1953. These figures do not include telephone, telegraph, and transit companies. (Unfortunately the expenditures for these groups are merged with other subdivisions so that the trend is confused.)

On an over-all basis the total programmed expenditures for all business groups are expected to exceed $27 billion this year, an increase of about one per cent over last year.

Efficiency Methods of Cleveland Electric Illuminating

In a recent talk before the New York Society of Security Analysts, Executive Vice President Ralph M. Besse of Cleveland Electric Illuminating Company described some of the numerous efficiency methods which his company has developed, as follows:

There is a fully integrated organization of specialists providing "on-the-scene" specialized skills; in the past year a promotion and compensation pattern for these people has been established, parallel to that of the supervisory groups.

A plan of decentralized management has been set up based on individual responsibility, planning, and control at the lowest levels of supervision, with adequate reporting upward. The organizational structure is designed to (1) clearly define functional areas of responsibility; (2) minimize layers of authority; and (3) maximize delegation of authority and coordination at the point of action. Individual expenditures are charged to the unit or individual responsible; each supervisor is responsible for the initial planning and budgeting of his unit and he must explain deviations from the budget. Section budgets are reviewed and consolidated into departmental budgets, and further consolidations are made until the complete budget for the company is developed.

Future plans are broken down into annual, 5-year, and long-range. An indication of the progress made in developing planning ability at the lower levels is the fact that none of the latest budget planning reports required revision by the top management. Five-year planning includes forecasts of the general level of business activity as well as of company trends; long-range forecasts usually look ahead ten years. The top eight executives meet weekly for long-range planning.

Considerable attention is given to performance measurement, analysis, and reporting, and this is considered the heart of the control system. Performance at all management levels is evaluated monthly; as with the budget estimates, the supervisors' reports are consolidated and passed upward at each successive level of the organization. Over 1,500 performance comparisons have been developed as tools by the various supervisors.

The company is apparently the first electric utility to apply work measurements to clerical operations on a company-wide basis. Time standards provide the basis for forecasting labor requirements, and such measurements have resulted in

estimated annual savings to date (for clerical work only) of $66,000, with another $50,000 "potential." Performance in various areas of expense, investment, and return are also compared with similar data for other electric utilities as a test of efficiency. In 1951 the company pioneered with a program of work simplification, mechanization, and methods, with savings to date of about $1,800,000. Of the nearly 7,000 suggestions submitted to date, 84 per cent have been accepted.

There is also an elaborate program for educating employees and developing management candidates. Individuals are selected for training in management techniques and company policies, and courses are given on request in specialized fields, such as interviewing techniques, collective bargaining, etc. There are also "after hours'" courses, open on a voluntary basis but widely participated in, to broaden employees' knowledge of company activities. Employees are encouraged (through tuition refunds, etc.) to attend outside educational programs including management courses at various universities, A.M.A. seminars, etc. Supplementing these educational methods there is an annual appraisal of all management employees followed by a specific development program for each, and a "job evaluation" designed to equate compensation with contribution.

As an indication of the excellent results of these various programs Mr. Besse pointed out that in 1954 the company served over 80,000 more customers than in 1949 with 700 fewer employees. Man-hours for operation and maintenance decreased 6 per cent despite a 40 per cent increase in kilowatt-hour output—thus there was a 23 per cent reduction in man-hours per customer in the five years.

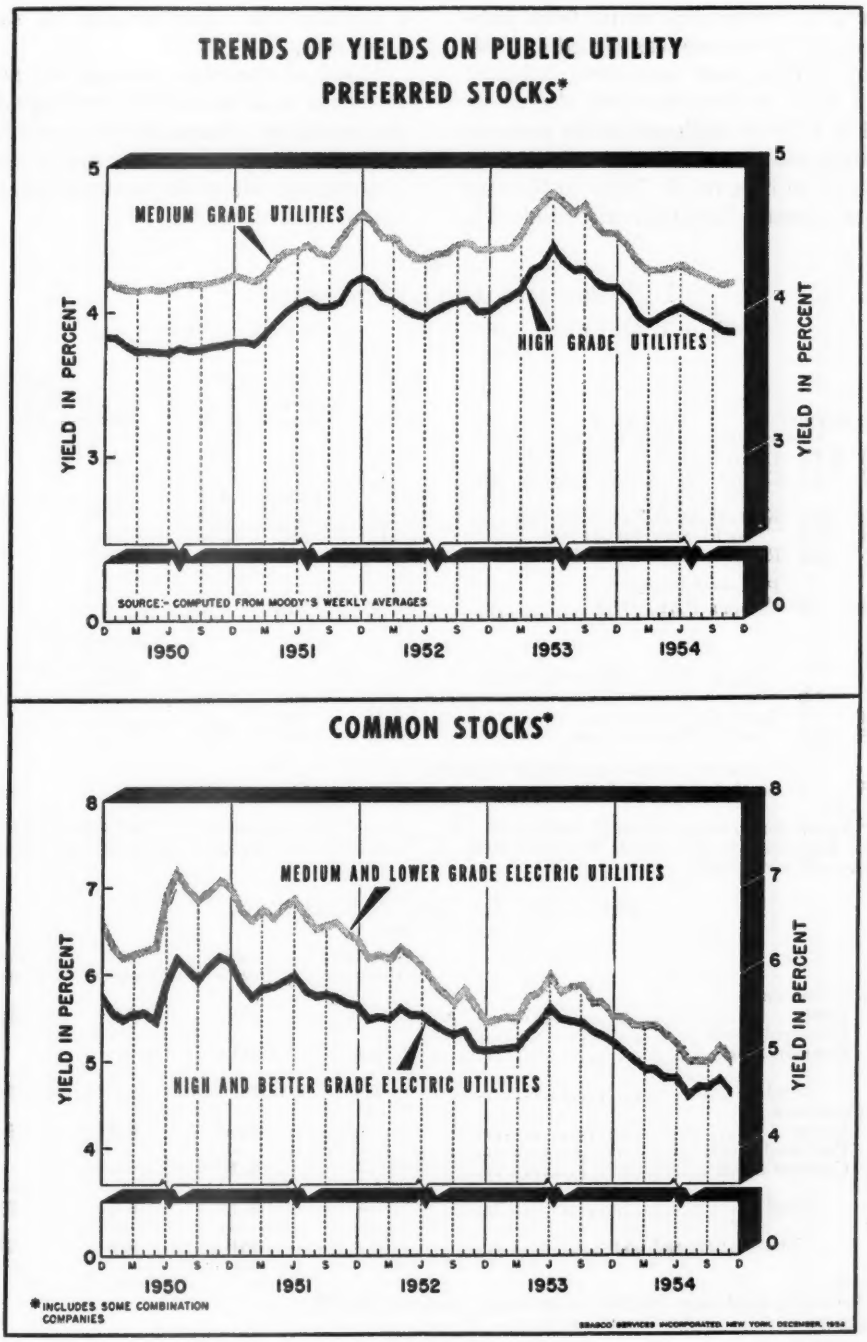
Narrowing Spread in Utility Stock Yields

The charts on page 383, prepared by Ebasco Services Incorporated, reflect two trends: (1) the decreasing spread in the yields on high-grade and lower-grade electric utility common stocks, and (2) the decreasing spread between yields on preferred stocks and common stocks. The table below shows the approximate changes, as indicated in the charts.

Tax Deductions for Anticipated Expenses

Some last-minute reductions in 1954 utility share earning figures have occurred because of the decisions of utility controllers to take advantage of § 462 of the 1954 Tax Code. This allows taxpayers operating on an accrual basis to deduct from their 1954 tax return not only the 1954 actual expenses, but also a reserve fund set aside for estimated expenses in

	January, 1950	*November, 1954*	*Decline*
Common Stocks			
(a) Medium and Lower-grade	6.5%	5.0%	1.5%
(b) High and Better-grade	5.7	4.7	1.0
Preferred Stocks			
(c) Medium-grade	4.3	4.3	—
(d) High-grade	3.8	3.8	—
Spread between (a) and (b)	.8	.3	.5
Spread between (b) and (c)	1.4	.4	1.0
Spread between (c) and (d)	.5	.5	—


TRENDS OF YIELDS ON PUBLIC UTILITY PREFERRED STOCKS*
MEDIUM GRADE UTILITIES
HIGH GRADE UTILITIES
YIELD IN PERCENT
SOURCE:- COMPUTED FROM MOODY'S WEEKLY AVERAGES
1950
1951
1952
1953
1954
COMMON STOCKS*
MEDIUM AND LOWER GRADE ELECTRIC UTILITIES
HIGH AND BETTER GRADE ELECTRIC UTILITIES
YIELD IN PERCENT
*INCLUDES SOME COMBINATION COMPANIES

later years where these result from projects on which income was earned in 1954. Many utilities have apparently deducted from 1954 earnings not only the wages paid in 1954 to employees while away on vacation, but part or all of the similar expense to be incurred in 1955. In the case of one company this apparently resulted in a reduction of share earnings of about 6 per cent.

However, these lost earnings will probably have to be reinstated, since repeal of the provisions (retroactive to January 1, 1954) has been requested by the Treasury Department. Many corporations are protesting against repeal.

FEBRUARY UTILITY FINANCING

PRINCIPAL PUBLIC OFFERING OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount	Description	Price To Public	Underwriting Spread	Offering Yield	Moody Rating	Indicated Success of Offering
		Mortgage Bonds and Debentures					
2/15	$ 7.0	Dallas P.&L. Deb. S.F. 3¼s 1980	102.15	.45C	3.13	Aa	d
2/17	1.5	Central Elec. & Gas Conv. Subord. Deb. 4¼s 1970	100	2.50N	4.25	B	a
2/16	16.0	Kansas City P.&L. 1st 3¼s 1985	102.52	.57C	3.12	Aaa	a
2/24	17.0	Texas El. Serv. 1st 3¼s 1985	102.13	.61C	3.14	Aa	d
2/25	10.0	Rochester G.&E. 1st 3⅜s 1985	102.77	.60C	3.23	A	d
		Preferred Stocks					
2/25	5.0	Carolina P.&L. $4.20	99.50	1.70N	4.22	—	a
						Earnings-Price Ratio	
		Common Stocks—Offered to Public					
2/9	1.0	Missouri Natural Gas	8.50	.85N	5.29	8.3	a
2/24	.9	South Georgia Natural Gas	6.00	.60N	—	—	a
2/25	12.4	Carolina Power & Light	24.50	.60N	4.49	6.7	a
		Common Stocks—Subscription Offerings					
2/25	3.7	South Carolina E. & G.	17.50	*N	5.14	7.6	—

*Commission to underwriters 10 cents on all shares, plus a varying amount up to 30 cents on unsubscribed shares, depending on the amount. N—Negotiated. C—Competitive. a—Reported well received. d—Reported issue sold very slowly.

FEBRUARY NEW MONEY FINANCING
(In Millions)

	Offered to Stockholders	Sold to Public	Sold Privately	Total Financing
Electric Companies				
Bonds	—	$45	$ 6	$51
Preferred Stock	—	5	16	21
Common Stock	$ 4	12	—	16
Total	$ 4	$62	$22	$88
Gas Companies				
Bonds	—	—	$ 8	$ 8
Preferred Stock	—	—	—	—
Common Stock	—	$ 2	—	2
Total	—	$ 2	$ 8	$10
Total Electric and Gas	$ 4	$64	$30	$98

Refunding operations (electric utility bonds) totaled $7,000,000.
Source of data—Irving Trust Company.

RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Gross Rev. (Mill.)			3/9/55 Price About	Dividend Rate	Approx. Yield	Share Earnings* Current Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Div. Payout	Approx. Common Stock Equity
		Pipelines									
$ 3	O	Alabama-Tenn. Nat. Gas	19	$ .60	3.2%	$1.45	7%	Sept.	13.1	41%	34%
14	O	East. Tenn. Nat. Gas	10	.60	6.0	.44	10	Dec.	—	136	17
38	S	Mississippi Riv. Fuel	57	2.40	4.2	3.70	71	Sept.	15.4	65	53
48	S	Southern Nat. Gas	34	1.60	4.7	1.89	D8	Dec.	18.0	85	26
143	O	Tenn. Gas Trans.	32	1.40	4.4	1.89	15	Dec.	16.9	74	18
137	O	Texas East. Trans.	26	1.40	5.4	1.62	22	June	16.0	86	19
63	O	Texas Gas Trans.	21	1.00#	4.8	1.61	8	Sept.	13.0	62	28
59	O	Transcont. Gas P. L.	28	1.40	5.0	2.06	26	Sept.	13.6	68	21
		Averages			4.7%				15.1	77%	
		Integrated Companies									
118	S	American Natural Gas	53	$2.00	3.8%	$3.67	11%	Sept.	14.4	54%	32%
18	O	Colorado Interstate Gas	60	1.25	2.1	2.17	10	Sept.	—	58	31
260	S	Columbia Gas System	16½	.90	5.5	1.09	43	Dec.	15.1	83	42
9	O	Commonwealth Gas	9	(a)	4.0a	.50	28	Dec. '53	18.0	—	68
10	A	Consol. Gas Util.	14	.75	5.4	1.01	D10	Oct.	13.9	74	57
191	S	Consol. Nat. Gas	33	1.50	4.5	2.64	31	Sept.	12.5	57	64
111	S	El Paso Nat. Gas	45	2.00	4.4	2.09	D36	Nov.	21.5	96	21
32	S	Equitable Gas	27	1.40	5.2	1.87	1	Sept.	14.4	75	34
10	O	Kansas-Neb. Nat. Gas	33	1.20	3.6	1.87	14	Dec. '53	17.6	64	34
78	S	Lone Star Gas	28	1.40	5.0	1.82	20	Dec.	15.4	77	39
20	S	Montana-Dakota Utils.	29	1.00	3.4	1.35	38	Sept.	21.5	74	35
14	O	Mountain Fuel Supply	30	1.00	3.3	1.47	NC	June	20.4	68	59
49	A	National Fuel Gas	22	1.00	4.5	1.52	19	Sept.	14.5	66	55
66	S	Northern Nat. Gas	44	2.00	4.5	2.27	2	Sept.	19.4	88	31
37	S	Oklahoma Nat. Gas	24	1.20	5.0	1.62	88	Dec.	14.8	74	30
87	S	Panhandle East. P.L.	78	2.50#	3.2	4.26	D7	Dec.	18.3	59	31
8	O	Pennsylvania Gas	21	1.00	4.8	.86	D52	Dec. '53	—	116	100
146	S	Peoples Gas Lt. & Coke	163	7.00	4.3	10.85	6	Dec.	15.0	65	36
23	O	Southern Union Gas	21	1.00	4.8	1.39	64	Sept.	15.1	72	34
209	S	United Gas Corp.	34	1.50	4.4	2.11	10	Sept.	16.1	71	43
		Averages			4.3%				16.6	73%	
		Retail Distributors									
23	A	Alabama Gas	32	$1.28	4.0%	$1.67	30%	Jan.	19.2	77%	42%
36	O	Atlanta Gas Light	25	1.20	4.8	2.16	48	Dec.	11.6	56	36
46	S	Brooklyn Union Gas	34	1.80	5.3	2.50	74	Dec.	13.6	72	41
28	O	Central Elec. & Gas	15	.80	5.3	1.14	7	Nov.	13.2	70	16
10	O	Central Indiana Gas	16	.60(b)	3.8	.78	20	Sept.	20.5	77	59
4	O	Chattanooga Gas	6	—	—	.33	136	Nov.	18.2	—	41
51	O	Gas Service	26	1.36	5.2	1.86	32	Dec.	14.0	73	40
6	O	Hartford Gas	38	2.00	5.3	2.42	17	Dec. '53	15.7	83	51
14	O	Houston Nat. Gas	27	1.00	3.7	2.15	6	July	12.6	47	22
14	O	Indiana Gas & Water	16	.70	4.4	1.19	23	Dec.	13.4	59	45
6	A	Kings Co. Lighting	15	.80	5.3	1.19	7	Dec.	12.6	67	25
38	S	Laclede Gas	13	.60	4.6	.93	5	Jan.	14.0	65	38
27	O	Minneapolis Gas	26	1.30	5.0	1.64	NC	Oct.	15.9	79	39
11	O	Mississippi Valley Gas	22	1.00	4.5	1.81	D8	Sept.	12.2	55	30
8	O	Mobile Gas Service	20	.90	4.5	1.12	D27	Sept.	17.9	80	30
6	O	New Haven Gas	30	1.60	5.3	1.87	31	Dec. '53	16.0	86	63
9	O	New Jersey Nat. Gas	22	1.00E	4.5	1.87	201	Dec.	11.8	53	24
54	O	Northern Illinois Gas	18	.80	4.4	.77	NC	May	—	104	49
183	S	Pacific Lighting	40	2.00	5.0	2.38	19	Dec.	16.8	84	38
12	O	Portland Gas & Coke	25	.90	3.6	1.51	D22	Dec.	16.6	60	46
8	A	Providence Gas	10	.48	4.8	.41	21	Dec. '53	—	117	61
3	A	Rio Grande Valley Gas	3	.12	4.0	.23	5	June	13.0	52	60
6	O	Seattle Gas	14	.40	2.9	.68	5	Dec.	20.6	59	60
7	O	South Jersey Gas	24	1.20	5.0	1.55	19	Nov.	15.5	77	35
22	S	United Gas Improvement	39	2.00	5.1	2.14	D5	Sept.	18.2	93	63
33	S	Washington Gas Light	41	2.00	4.9	3.03	54	Dec.	13.5	66	31
5	O	Western Kentucky Gas	13	—	—	1.10	13	Dec. '53	11.8	—	36
		Averages			4.7%				14.9	72%	

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER UTILITIES

Gross Rev. (Mill.)			3/9/55 Price About	Dividend Rate	Approx. Yield	Share Earnings* Current Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Div. Payout	Approx. Common Stock Equity
		Communications Companies									
		Bell System									
$4,417	S	Amer. Tel. & Tel. (Cons.)	182	$9.00	4.9%	$11.93**	3%	Nov.	15.3	75%	65%
220	A	Bell Tel. of Canada	48	2.00	4.2	2.43	5	Dec.	19.8	82	62
37	O	Cin. & Sub. Bell Tel.	86	4.50	5.2	5.16	26	Dec.	16.7	87	100
163	A	Mountain Sts. T. & T.	126	6.60	5.2	7.13	32	Dec.	17.7	93	77
259	A	New England T. & T.	135	8.00	5.9	7.84	5	Dec.	17.2	102	56
632	S	Pacific Tel. & Tel.	134	7.00	5.2	7.96**	43	Dec.	16.8	88	59
81	O	So. New England Tel.	42	2.00	4.8	2.18	8	Dec.	19.3	92	67
		Averages			5.1%				17.5	88%	
		Independents									
10	O	Calif. Water & Tel.	19	$1.00	5.3%	$1.48	22%	June	12.8	68%	38%
11	O	Central Telephone	17	.90	5.3	1.59**	D10	Nov.	10.7	57	24
32	O	Continental Telephone	21	1.00	4.8	1.50 Est.	—	Dec.	14.0	67	15
2	O	Florida Telephone	15	.80	5.3	.85	D14	Dec. '53	17.6	94	—
143	S	General Telephone	40	1.60	4.0	2.91**	D3	Jan.	13.7	55	37
5	O	Inter-Mountain Tel.	15	.80	5.3	.93	43	Dec. '53	16.1	86	64
17	S	Peninsular Tel.	43	1.80	4.2	2.42	25	Dec.	17.8	74	62
16	O	Rochester Tel.	17	.80	4.7	1.11	D10	Sept.	15.3	72	35
2	O	Southeastern Tel.	14	.80	5.7	1.15	15	June	12.2	70	—
7	O	Southwestern States Tel.	19	1.00	5.3	1.54	12	Dec. '53	12.3	65	34
15	O	United Utilities	20	1.12	5.6	1.61**	D1	June	12.4	70	37
222	S	Western Union Tel.	89	4.00	4.5	7.58	12	Dec.	11.7	53	83
		Averages			5.0%				13.9	69%	
		Transit Companies									
29	A	Capital Transit	11	$ .80	7.3%	$ .75	D32%	Sept.	14.7	107%	82%
14	O	Cincinnati Transit	5	.75	15.0	.93	D17	Dec. '53	5.4	81	84
9	O	Dallas Ry. & Terminal	13	1.40	10.8	1.83	D21	Dec. '53	7.1	77	71
245	S	Greyhound Corp.	15	1.00	6.7	1.17	D10	Mar.	12.8	85	82
26	O	Los Angeles Transit	17	1.00	5.9	1.20	4	Dec. '53	14.2	83	88
30	S	National City Lines	23	1.40	6.1	2.35	26	Dec. '53	9.8	60	82
73	O	Phila. Transit	14	.30	2.1	Deficit	—	Dec. '53	—	—	25
7	O	Rochester Transit	4½	.40	8.9	.57	119	Dec. '53	7.9	70	—
27	O	St. Louis P. S.	15	1.40	9.3	1.22	30	Dec. '53	12.3	115	90
18	S	Twin City R. T.	18	1.60	8.9	.22	NC	Dec. '53	—	—	43
25	O	United Transit	4	—	—	.73	30	Dec. '53	5.5	—	—
		Averages			8.1%				10.0	85%	
		Water Companies									
		Holding Companies									
32	S	American Water Works	10	$ .50	5.0%	$1.03	D10%	Sept.	9.7	49%	16%
4	O	New York Water Service	66	.80	1.2	1.38	NC	June	—	59	32
		Operating Companies									
3	O	Bridgeport Hydraulic	33	$1.60	4.8%	$1.57	D3%	Dec. '53	21.0	102%	53%
11	O	Calif. Water Service	41	2.20	5.4	2.56	1	Jan.	16.0	86	29
2	O	Elizabethtown Water	132	5.00	3.8	6.65	D4	Dec. '53	19.8	75	—
7	S	Hackensack Water	44	2.00	4.5	3.75	NC	Aug.	11.7	53	41
5	O	Jamaica Water Supply	38	1.80	4.7	2.90	3	Dec.	13.1	62	22
3	O	New Haven Water	59	3.00	5.1	2.50	D10	Dec. '53	—	120	58
6	O	Phila. & Sub. Water	33	1.00(c)	3.0	2.58	NC	Oct.	12.8	39	20
3	O	San Jose Water	42	2.00	4.8	2.86	55	Dec.	14.7	70	—
9	O	Scranton-Springbrook	19	.90	4.7	1.33	14	Sept.	14.3	68	31
3	O	Southern Calif. Water	14½	.65	4.5	.84**	D7	Sept.	17.3	77	—
3	O	West Va. Water Service	37	1.40	3.8	1.41	—	Sept.	—	99	17
		Averages			4.6%				15.9	79%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *Earnings are calculated on present number of shares outstanding, except as otherwise indicated. **On average shares outstanding. #—A 2 per cent stock dividend was also paid December 30, 1954, and in previous year. (a)—Paid 4 per cent stock dividend. (b)—Paid 10 per cent stock dividend. (c)—Paid 5 per cent stock dividend. NC—Not comparable. E—Estimated.

What Others Think

The Cabinet Report on Fuel Resources

SHORTLY after the United States Supreme Court laid down its historic decision requiring federal regulation of independent natural gas producers in the Phillips Petroleum Company Case of last June, the President established an Advisory Committee on Energy Supplies and Resources Policy. This Cabinet level committee, under the direction of Defense Mobilizer Flemming, and made up of the heads of seven other Cabinet agencies, was asked by the President to study all fuel needs, including those for natural gas, in terms of supplies required for national growth and defense, and to report back with specific policy recommendations. The following is the text of that long-awaited report, as it was released February 26, 1955:

Introduction

The importance of energy to a strong and growing economy is clear. As conditions of supplies and reserves of coal, oil, and natural gas change and as both defense and peacetime requirements come more clearly into focus, the bearing of government policies upon energy needs re-examination.

What degree and kind of public regulation is appropriate to the present situation and future outlook? What trade policies for energy supplies will most effectively express the overlapping national needs for adequate protectible supplies in case of war and for encouragement of economic growth of this country and friendly countries elsewhere in the world? What steps may be taken to improve the economic position of the coal industry, now seriously depressed, without penalizing competing industries, as a means of enhancing the ability of that industry to contribute to the national defense? More particularly, should specific changes be made in tax, freight rate, research, government purchasing, or other policies in the energy field?

These and other policy questions press for careful review and decision.

On July 30, 1954, the President established an Advisory Committee on Energy Supplies and Resources Policy. The Director of the Office of Defense Mobilization was designated as chairman and the heads of the following agencies served as members: Departments of State, Treasury, Defense, Justice, the Interior, Commerce, and Labor.

THE White House directive respecting the committee's assignment included the following specific statements:

At the direction of the President the

committee will undertake a study to evaluate all factors pertaining to the continued development of energy supplies and resources fuels in the United States, with the aim of strengthening the national defense, providing orderly industrial growth, and assuring supplies for our expanding national economy and for any future emergency.

The committee will review factors affecting the requirements and supplies of the major sources of energy including: coal (anthracite, bituminous, and lignite, as well as coke, coke tars, and synthetic liquid fuels); petroleum and natural gas.

The committee has been aided greatly by an able and representative task force appointed pursuant to the President's instructions. The committee's recommendations are set forth below.

Recommendations

1. *Natural Gas Regulation*

WE believe the problem of natural gas regulation should be approached from the viewpoint of assuring adequate supplies and the discovery and development of additional reserves to support such supplies, in the interests of national defense, an expanding domestic economy, and reasonable prices to consumers.

To secure these objectives, it is essential to give due consideration to (1) the operations known as the production of natural gas, (2) the transportation of gas in interstate transmission lines, and (3) the distribution of gas in municipalities. Individual companies may engage in more than one of these activities. Each operation of such companies should be treated by like criteria according to its appropriate industry function.

In the production of natural gas it is important that sound conservation practices be continued. This area of conservation management is under the jurisdiction of state conservation commissions. In the interest of a sound fuels policy and the protection of the national defense and consumer interests by assuring such a continued exploration for and development of adequate reserves as to provide an adequate supply of natural gas, we believe the federal government should not control the production, gathering, processing, or sale of natural gas prior to its entry into an interstate pipeline.

The interstate transmission of natural gas by the interstate transmission lines and the subsequent sale of such gas for resale are public utility functions and should be under the regulation of the Federal Power Commission. In considering the certification of new lines and applications for increased rates based on new or renegotiated purchase contracts, the commission should consider, in order to provide protection for the consumer, not only the assurance of supply but also whether the contract prices of the natural gas which the applicant has contracted to buy are competitively arrived at and represent the reasonable market field price, giving due consideration, in the interest of competition, to the reasonableness and appropriateness of contract provisions as they relate to existing or future market field prices.

THE several states or their political subdivisions should continue to provide the public utility regulation of distributing companies in accordance with usual utility practices. Thus the complete cycle of natural gas production, transmission, and utilization will be appropriately regulated: the production and conservation of natural gas by the state conservation commissions; the interstate transmission of natural gas by the Federal Power Commission; and the distribution by the local public utility commission.

2. Sales Below Cost by Interstate Pipeline Companies

THE basic principle regarding the regulation of natural gas and the use of alternative energy sources should be as far as possible that of free choice by the consumer and free and fair competition among suppliers. This, it is confidently thought, will provide most effectively for the assurance and flexibility of energy supply, both for economic growth and strong security readiness. But sales either for resale or direct consumption below actual cost plus a fair proportion of fixed charges which drive out competing fuels constitute unfair competition and are inimical to a sound fuels economy.

The committee recommends, therefore, that appropriate action be taken that will prohibit sales by interstate pipelines either for resale or for direct consumption, which drive out competing fuels because the charges are below actual cost plus a fair proportion of fixed charges.

3. Eminent Domain for Natural Gas Storage

The power of eminent domain for the acquisition of surface and mineral rights for the development of underground storage reservoirs should be granted subject to appropriate safeguards to protect the public safety, including the mining industry.

4. Crude Oil Imports and Residual Fuel Oil Imports

AN expanding domestic oil industry, plus a healthy oil industry in friendly countries which help to supply the United States market, constitute basically important elements in the kind of industrial strength which contributes most to a strong national defense. Other energy industries, especially coal, must also maintain a level of operation which will make possible rapid expansion in output should that become necessary. In this complex picture both domestic production and imports have important parts to play; neither should be sacrificed to the other.

Since World War II importation of crude oil and residual fuel oil into the United States has increased substantially, with the result that today these oils supply a significant part of the U. S. market for fuels.

The committee believes that if the imports of crude and residual oils should exceed significantly the respective proportions that these imports of oils bore to the production of domestic crude oil in 1954, the domestic fuels situations could be so impaired as to endanger the orderly industrial growth which assures the military and civilian supplies and reserves that are necessary to the national defense. There would be an inadequate incentive for exploration and the discovery of new sources of supply.

IN view of the foregoing, the committee concludes that in the interest of national defense imports should be kept in the balance recommended above. It is highly desirable that this be done by voluntary, individual action of those who are importing or those who become importers of crude or residual oil. The committee believes that every effort should be made and will be made to avoid the necessity of government intervention.

The committee recommends, however, that if in the future the imports of crude oil and residual fuel oils exceed significantly the respective proportions that such imported oils bore to domestic production of crude oil in 1954, appropriate action should be taken.

The committee recommends further that the desirable proportionate relationships

between imports and domestic production be reviewed from time to time in the light of industrial expansion and changing economic and national defense requirements.

In arriving at these conclusions and recommendations, the committee has taken into consideration the importance to the economies of friendly countries of their oil exports to the United States as well as the importance to the United States of the accessibility of foreign oil supplies both in peace and war.

5. *Petroleum Refining Capacity*

THE Departments of Defense and the Interior should have studies made by their staffs and expert advisors as to the adequacy of present and prospective refinery capacity, both as to amount and dispersal, as well as other factors, to determine the need for any measures to maintain refinery capacity necessary for defense purposes, particularly the capacity operated by small, independent refineries.

6. *Tax Incentives*

a. Present tax provisions on coal, oil, and gas production have been an important factor in encouraging development of energy sources at a pace about in keeping with demand. Further analysis and study by the appropriate branches of the government should from time to time be made to review the amount and method of making such allowances to maintain proper relationships with continuing changes in other features of the tax law. Any changes which may be proposed in the future must be analyzed in terms of their probable effect on development of domestic resources needed for economic progress and national defense as well as the fiscal and tax policies of the government.

b. Retroactive tax legislation and special relief provisions should be avoided.

c. Accelerated amortization should be used only to insure the maintenance of a sound mobilization base for energy supplies.

7. *Research and Development Program for Coal* (Text omitted.) 8. *Unemployment and Business Distress in the Coal Industry* (Text omitted.) 9. *Coal Freight Rates* (Text omitted.) 10. *Coal Exports* (Text omitted.) 11. *Mobilization Requirements for Coke* (Text omitted.)

12. *Government Fuel Purchasing Policy*

IN working out a more consistent and equitable coal purchase policy, the following steps should be taken:

a. The Secretary of Labor under the Walsh-Healy Act should pursue his present policy of making determinations of wage standards applicable in the coal producing areas and should establish these standards at the earliest practicable date.

b. The government agencies should, to the extent practicable, purchase not less than 75 per cent of their estimated annual coal requirements on a contract basis.

c. All government agencies purchasing coal should, prior to and after the award of the contract, verify the quality of the coal offered and supplied to the agencies.

d. All government contracts for the purchase of coal should contain appropriate escalator clauses which protect the buyer and the seller.

e. In instances where it is not possible for a government agency to take all the coal for which it has contracted, the deficit should be apportioned equitably among all participating contract suppliers without penalty to the government.

f. Coal suppliers should be required to submit, along with their bids, proof of their ability to produce the requirements at the times specified.

g. All coal suppliers to the government,

regardless of size, should comply with the Federal Coal Mine Safety Act.

h. All transactions with the government relating to coal purchases and supply should be public information.

i. The domestic fuel purchasing policies set forth above should be applied to purchases of coal by companies acting as agents for the federal government, as well as to purchases made direct by government agencies.

Prior to the purchase of any fuel by a federal government agency having a large annual use of fuel, that agency should request advice from the Office of Defense Mobilization as to how this purchase can contribute to the maintenance of a strong mobilization base within the domestic fuels industry. The Office of Defense Mobilization should be directed by Executive Order to develop a mechanism for accomplishing this objective.

Swedish Telephone Depreciation on Replacement Basis

BEHIND the government-owned telephone-telegraph service which the Swedish Telegraph Administration has been putting at the disposal of the Swedish public for the past one hundred years is an idea of sound and independent financial operation, unusual among national and federal enterprises in whatever country. As the editor of *Tele* says, in the Swedish Telegraph Administration magazine's jubilee issue, "the goal has always been, with the deepest sense of responsibility as regards Sweden's economic, social, and cultural development, to offer the best possible tele-service at prices that are in agreement with sound business." In a subsequent article, entitled "The Financing of the Swedish Telegraph Administration's Investment Program," Hans Heimbürger, head of the financial division, tells us what the administration has been doing, in light of the sound business practice goal.

At the end of the Second World War, the administration found the need for new capital investment in the telephone field had grown considerably:

> A number of causes have contributed to this. It has been necessary to complete work which was neglected during the war, when the available labor and material were used for defense needs and to an extensive armament program; in addition the flow of new subscribers has reached a record level since the end of the war. The increased flow has, indeed, been so great that even now, eight years after the end of the war, the deficiencies of the war years have not been made up and there is a widespread shortage of reserves in exchanges and line networks, and an abnormally large number on the subscribers' waiting list. The number of applications which have not been connected within three months has been for some years around 20,000 and the total number of waiting subscribers can be estimated at about twice this, or 2 per cent of the total number of existing subscriptions. . . .

THE principal reason for the rapidly growing stream of subscribers, says Mr. Heimbürger, has been the considerable increase in the standard of living, which has meant that those classes of the population which earlier regarded the telephone as beyond their means have come to feel the need for it:

> Even factory workers and farm laborers now consider the telephone as a

necessity of life. The increased standard of living has also produced a high marriage frequency—people marry earlier than previously—and a greater breaking up of households, since single men and women seek their own homes more and more in place of continuing to live with their parents or lodging in the homes of others.

To some extent, too, the large flow of subscriptions has been the result of the telephone tariff schedules, the author adds. In 1948, all special initial and annual charges for lines to the subscriber's telephone exchange were almost completely abandoned. This step was the last stage in the long-established policy of the telephone board that there should be an equalization of telephone charges between built-up areas and rural areas. It was felt that the cost of the telephone to the subscriber should be independent of where he lives:

> . . . In such a thinly populated country as Sweden, the result has naturally been that a considerable number of people who live far from the nearest telephone exchange could afford to take out a telephone subscription. It is true that at the same time a general effort to slow down the flow of subscriptions was made by increasing the initial charge for a subscription to 200 kr., but this had only a temporary effect since the reduction in the value of money, particularly during 1951 and 1952, appreciably reduced the real value of this charge. Furthermore even a charge of 200 kr. was for a great part of the country areas an appreciably lower amount than was incurred previously, when additional initial charges were made for line exceeding two kilometers in length.

To these factors, which stimulated new subscriptions and thus also increased the need for investment, there was added a considerable need for capital for automatization and conversion to cable of the Swedish telephone network. This technical modernization of telephone operation is one of the largest now going on in the entire Swedish community, according to the author, but it can be put through only with large amounts of additional capital. Contributing also to the need for capital, though on a minor scale, have been such things as the building up of a tele network and the modernization of broadcasting stations.

The financing of new installations for the Swedish Administration is now carried out in the following way:

> The Riksdag [Swedish Parliament] fixes in each budget year the maximum amount which the administration may spend on investment and divides this investment grant into a certain number of sectional grants. So far as the previous year's grant has not been wholly used, it may be carried forward, so that in some cases the spending under various heads may be greater than the amount fixed by the Riksdag. . . .
>
> The grants made by the Riksdag do not, however, imply that these amounts in their entirety will be placed at the disposal of the Telegraph Administration by the Treasury. The installation work must first be defrayed by the writing down of capital during the year. The term "grant" is therefore rather misleading since in practice it is a question of fixing the maximum investment for various purposes. Funds may also be available for defraying installation costs as a result of sales of installations, for example the sale of older buildings no longer suitable for the administration's purposes, and also contributions which subscribers make towards some

installation work. These latter contributions consist mainly of the single payments made by subscribers for the provision of private automatic branch exchanges. Having regard to the competition of purely internal telephone installations without connection to the general telephone network, the board has found it desirable to adjust the charges for these automatic exchanges so that the subscriber pays a comparatively large amount as a contribution towards the installation cost and is in turn given the lowest possible subscription.

So far as these receipts do not suffice, the administration must use the national funds for new installations. Where work for defense purposes is concerned—this applies to installations which do not provide any income for the administration—the necessary funds are gained by direct grant from taxation in the national budget. Other necessary amounts are provided to the extent which the existing rules for the Swedish national budget permit, according to the author, with due regard given to the fact that these amounts constitute a loan for interest-bearing investment. In parentheses it must be pointed out that the Telegraph Administration does not pay interest on these loans but that instead any profit made by the administration must be handed over to the Treasury in its entirety. *The demand laid upon the administration is that this profit shall be at least equal to the current level of interest on the administration's share of the national debt.* Mr. Heimbürger makes this explanatory statement regarding the substitution of replacement cost for original cost as the basis for depreciation accruals and deductions:

> Beginning with the budget year 1951-52, a significant change in regard to the writing off of the administration's capital equipment was made, in that the writing off is no longer to be calculated on the book value of the installations, that is on what they cost initially, but instead on their replacement value, or the book value corrected to take account of the decrease in the real value of money. In practice this recalculation is made with a special installation cost index, which is based partly on the average wage rate per hour for the administration's workers (including sick and holiday pay and expenses) and partly on some selected types of material used for the administration's work, these prices being weighted in proportion to the consumption of the various classes of material. A separate building cost index is used for structural buildings and this is obtained from another source. The calculations will clearly only give an approximate picture of the change in costs.

As an example of the workings of these calculations, the author takes the budget year 1952-53 to show that the replacement value for buildings has been taken to be 61 per cent above the book value and the figures for telephone and telegraph installations are 88 per cent, and for various kinds of radio installation 71 per cent above book value. Writing off is at the rate of 2 per cent for buildings (excluding site values), 4 per cent for telephone and telegraph installations, and 10 per cent for radio installations, corresponding to an assumed average life for these installations of fifty, twenty-five, and ten years, respectively. So far as can be judged, the Swedish expert states, these estimated lives should be somewhat conservative.

In order to carry through the change in the manner of writing off depreciation, an increase of charges by the administra-

tion naturally was unavoidable, but there were several complicating factors:

> . . . At the same time such an increase was necessary as a result of the large increase of prices and wages which took place during 1951 and which was a consequence both of the general increase of prices in international markets after the outbreak of the Korean War and of the elimination of certain food and other subsidies. Although it was thus a case of a double raise of the tariff, the increase was carried through without difficulty because the increase in charges was less than the general price and wage increases above the prewar level. That this was possible must be attributed to the saving in operating costs which had steadily been made by automatization. After the general price and wage level in Sweden took a new step upwards in 1952, a further increase in tariffs became necessary, but this, however, did not need to be as great as in the previous year.
>
> This also did not affect appreciably the earlier relation between the increases in tariffs and the general price level. Compared with 1935, the basic year for the Swedish cost of living index, the cost of living in Sweden had risen in the spring of 1953 by 113 per cent, while the increase of the most common telephone charges had been limited to 58-86 per cent.

After the increase in writing off rates, which was the result of the new regulation, the author states that the estimates of financing of installation work for 1952-53 took the following form:

	Million Kr.
Total investment	248.0
Charged against this:	
Writing off	145.0
Installation contribution from subscribers and sales of equipment	2.5
Provided by the Treasury	
From taxation	2.5
On loan	98.0

Of the total installation costs for the budget year 1952-53, the author concludes, the administration thus supplies 147,500,000 kr. or about 60 per cent, while the Treasury contribution amounts to 100,500,000 kr., or 40 per cent.

The March of Federal Taxes

"In 1939, World War II started in Europe. In that year, for every dollar we paid out in dividends we provided 37 cents for payment of federal income taxes. In 1953, for each dollar of dividends, we provided $1.16 for federal income taxes. In other words, during this inflationary war and postwar period, our burden of federal income taxes more than tripled relative to dividends. And this does not include the personal income taxes you, in turn, paid on the dividends you received. We recognize, of course, that our government must be supported. Our only question is whether or not corporations and their stockholders are today paying more than their fair share."

—Willis Gale,
Chairman of the board, Commonwealth Edison Company.

The March of Events

Smith Always Independent

No Senate hearings have yet been slated on President Eisenhower's nomination of William R. Connole to the Federal Power Commission. Connole's term would not start until the expiration of the present term of Commissioner Nelson Lee Smith on June 22nd.

In this connection, it was stated in PUBLIC UTILITIES FORTNIGHTLY, March 17th issue, page 338, that Commissioner Smith was listed as a Republican when appointed to the FPC but later changed to Independent. It has since been noted that Commissioner Smith, who informed President Eisenhower that he did not desire reappointment, has been officially an Independent since 1937, and the transcript of the record on the hearings before the Senate Interstate Commerce Committee regarding his confirmation in 1950 specifically covers this point.

The erroneous assumption was caused by the fact that Commissioner Smith was originally charged to the commission as a Republican, in accordance with precedent, because he was a non-Democratic member when originally appointed in 1943.

INGA Meeting Planned

THE annual membership meeting of the Independent Natural Gas Association of America will be held September 11th to 13th, inclusive, at Jasper Park Lodge, Jasper National Park, Jasper, Alberta, Canada. Reservations for the meeting are being handled by the association's headquarters in Washington, D. C. Attendance at the meeting will afford an opportunity to visit Yellowstone and Glacier National parks, also Lake Louise or Banff.

Appointees Approved

THE Senate on March 14th approved without objection President Eisenhower's nomination of John von Neumann, of New Jersey, to be a member of the Atomic Energy Commission.

The Senate also confirmed the nomination of George C. McConnaughey, of Ohio, to be a member of the Federal Communications Commission. He has already been named chairman of the FCC under a recess appointment dated October 4th. Allen Whitfield of Des Moines, Iowa, has been named to the AEC.

Florida

Phone Rate Increases Approved

THE state railroad and public utilities commission issued an order on March 9th permitting the North Florida Telephone Company to charge higher rates in several communities on a 12-month trial basis.

The commission said the utility is acquiring exchanges of the Florida Telephone Corporation in 10 communities at a cost of $555,000 and plans to convert these and three new exchanges to dial operation.

The order said to do this it will be necessary to borrow $2,500,000 from the Rural Electrification Administration and attract $468,100 in equity capital.

Declaring it was unwilling to make a final order but would hear the case again after a 12-month trial of the rates, the commission said, "It is apparent from the evidence before the commission that some increases must now be allowed to become effective at each exchange as it is converted to dial." The order directed the company to post a $5,000 bond for each exchange to cover any future downward adjustment of the rates.

AEC Approves Power Reactor Study

LEWIS L. STRAUSS, chairman of the Atomic Energy Commission, recently announced the commission had approved a proposal by the Seminole Electric Cooperative, Inc., of Madison, Florida, to study the feasibility of small central station nuclear power plants. The study will be performed under the AEC's industrial participation program, which has been under way since 1951.

Seminole is a federation of five electric distribution co-operatives in north-central Florida. The member co-operatives are financed by Rural Electrification Administration loans. The REA will observe and assist in the Seminole study and will report to the REA borrowers on developments affecting the REA program.

Idaho

Municipal Gas Facilities Proposed

A PROPOSED state constitutional amendment to allow Idaho cities and villages to operate and maintain facilities for distribution and sale of natural gas was introduced in the state senate early this month by its state affairs committee.

Under the proposal, facilities for distribution of natural gas would be included with water systems, sewage disposal plants, and off-street parking facilities that cities would be allowed to finance with revenue bonds.

Municipalities would be authorized to "purchase, construct, equip, operate, and maintain facilities for the distribution and sale of natural gas." The localities would be authorized to "levy such rates and charges as may be deemed necessary, and to issue, without limitation, revenue bonds to pay for the same."

The state attorney general had earlier expressed doubt as to the constitutionality of a bill previously introduced in the Idaho house which would authorize cities to create authorities to finance and handle natural gas distribution facilities.

Minnesota

Commissioners Oppose Change

STRONG opposition was recently expressed by the state railroad and warehouse commissioners against Governor Freeman's proposal to strip the agency of much of its power and to make members appointive instead of elective.

A letter to state legislators protesting the governor's reorganization plan was signed by Commission Chairman Ewald W. Lund and the other two commissioners, Hjalmar Petersen and Paul A. Rasmussen. They wrote:

> It is our judgment that the interest of the public can be served best by having the commissioners elected by the voters and responsible to them.
>
> It seems strange that the voters who have the ability to elect a governor, secretary of state, attorney general, and other state officials, as well as the members of the state legislature, for some unknown reason should lose their capability to elect qualified men as members of the Minnesota Railroad and Warehouse Commission.
>
> In a representative form of government, the closer the government can be kept to the people the better.

Governor Freeman recommended that the legislature abolish the commission as an elective agency and place its rate-making functions in a new 3-member state public utilities commission appointed by the governor.

Missouri

Bill to Repeal Utility Antistrike Act Introduced

A BILL to repeal the King-Thompson Act, prohibiting strikes against public utilities, was among bills introduced in the state house recently.

The measure, two lines in length, would repeal all sections of the act, which was passed in 1947 in an effort to assure continued operation of essential public utilities in the interests of the welfare of the state as a whole.

The repeal measure was similar to ones which have been introduced at previous sessions of the legislature.

The law provides machinery for arbitration of disputes between labor and the utilities and authorizes seizure and operation of the utilities by the state, if deemed necessary by the governor.

Another bill which would modify the present law by making the state liable for damages that might accrue during the period a utility was under state control also was introduced.

Montana

Attorney General May Challenge Rates

POWER of the state attorney general to challenge the validity of public utility rate increases granted by the state public service commission was upheld early this month by the state supreme court.

Unanimous opinions by the high state tribunal sent back to the district court two companion cases for trial on their merits. The cases were instituted by State Attorney General Arnold H. Olsen in an attempt to nullify a telephone rate boost for the Mountain States Telephone &

Telegraph Company and a gas rate hike for the Montana Power Company. Both rate increases had been approved by the commission in 1953.

Olsen claims the increased phone rates are bringing Mountain States $1,288,300 a year in Montana, while the higher gas rates are bringing Montana Power an extra $1,400,000.

The Lewis and Clark county district court at Helena had ruled in both cases that Olsen, as attorney general, lacked the right to make an appeal because he did not show himself to be a party in interest.

Nebraska

Power Line Resolution Offered

FEDERAL construction of a high-voltage transmission line from Fort Randall dam in South Dakota to Grand Island, Nebraska, is urged in a resolution introduced in the state legislature recently.

The resolution would ask Congress for funds to complete a 230,000-volt line by 1956.

Vermont

State Power Authority Proposed

A BILL to set up a state power authority, empowered to construct transmission facilities and atomic reactor plants, was recently reported being sponsored in the state legislature. The authority set up would be called the Vermont Energy Corporation, to be managed by a board of five directors named by the governor with senate approval.

Declaring that low-cost power and acquisition of its sources were in the general public interest, the sponsors said the authority would take all power negotiations out of the hands of the state public service commission. The commission is now set up as the state agency authorized to negotiate with New York state for St. Lawrence power. A bill extending the authority to contract for transmission of the power passed the house recently.

The authority would be set up as a self-paying proposition. All appropriations made by the state would be treated as advances to be repaid without interest out of the proceeds of bonds or revenues derived from any project of the agency.

Wisconsin

Commissioner Appointed

GOVERNOR Walter Kohler recently announced the appointment of Assemblyman Nicholas J. Lesselyoung (Republican, Fond du Lac) to the state public service commission, to take his new post after the 1955 state legislature adjourns next summer.

Lesselyoung will succeed W. F. Whitney, member of the commission since 1939. Kohler said that Whitney's age (seventy-four) was the reason for not reappointing him.

"Mr. Whitney has a distinguished record as a member of the commission, and the citizens of the state owe him a debt of gratitude for the work he has done," Kohler said in his announcement.

Whitney's term expired on March 7th.

Progress of Regulation

Litigation Expense Included in Original Cost of Licensed Power Project

COSTS incurred by a power company in unsuccessful litigation to resist and avoid compliance with a regulation requiring a license for a power project should be allowed as part of the original cost of the project, according to the United States court of appeals. It so held in reversing a Federal Power Commission order excluding these expenses, reported in (1954) 3 PUR3d 116, 121.

The litigation was reported in PUR 1933C 433, (1939) 31 PUR NS 65, and (1940) 36 PUR NS 129, and has been referred to as the "New river litigation." It concerned the company's unsuccessful efforts to avoid taking a standard form license for the project. It ended when the Supreme Court held that the New river was a navigable water and that a license was required for any power project constructed on it.

Basis for Expenses

The company had good reasons for thinking that these suits were well-founded. In addition to a report of the Chief of Engineers that the new river was not navigable, the company had the opinion of the Honorable Charles E. Hughes, one of the "greatest lawyers of the country," that the company could not be required to take the standard form license to which it was objecting. The company also knew that the Attorney General of the United States had given an opinion that the United States had no power to prevent the construction of the project unless its operation would tend to impair navigability of another river and for that reason had recommended the issuance of a minor part license.

In addition to this, the state of Virginia was asserting conflicting rights. The court concluded that in view of this state of affairs, it was not only wise but necessary that a court decision be obtained to set these questions at rest. It said:

> The litigation was unquestionably undertaken for the benefit of the project which was ultimately licensed, and the costs of that litigation were a part of the legitimate costs of bringing that project into being. Any businessman would so regard them, any purchaser of the project would so regard them, and there is nothing in the statute which requires that they be treated in any other manner.

Net Investment Defined

The term "net investment" as used in the Federal Power Act is defined by refer-

ence to a classification under the Interstate Commerce Act as meaning actual legitimate original cost. The term "cost" as used in the Interstate Commerce Commission regulations includes all processes connected with the acquisition and construction of original equipment. The court held, consequently, that the litigation expenditures were unquestionably made in connection with the construction of the project and fell within the letter as well as the spirit of the regulation.

Imprudent Expenditures

It was conceded that if the expenses had been imprudently made, had not been made in good faith, or had been excessive in amount, they should not be allowed. But they were not attacked on any of these grounds. On the contrary, the commission conceded that they were prudent, proper, and reasonable, and that they would be capitalizable as a part of the cost of the project for all purposes except the purposes of the statute here under consideration. The court concluded they were capitalizable for that purpose also, saying:

> If the valuation should ever become important for the purposes of purchase or rate making it will be because the company's investment in the property is less than its fair value, for the lowest of these must be taken under the statute; and if rate making or purchase is to be based on investment in property which is lower than its fair value, it is but fair and honest that all of the investment which the owner has made in the property be considered.

Appalachian Electric Power Co. v. Federal Power Commission, No. 6835, January 5, 1955.

Tax Claim on 100 Per Cent Defense Facilities Construction Cost Allowed

THE United States court of claims has ruled (4 to 1) that an electric utility could recover $5,885,388.22, which it claimed in overpaid income and excess profits taxes for the years 1943-45. During World War II, demand was made upon the utility for additional service requiring an expansion of its facilities. Pursuant to § 124 of the Internal Revenue Code, the utility company applied for a "necessity certificate" covering new plant construction and a transmission line 55 miles to a substation, a total claim of $11,246,256.54 for purposes of amortization. The opinion of Judge Madden, for the court's majority, stated:

> . . . Because of the 35 per cent limitation in the certificate, the Commissioner of Internal Revenue permitted the rapid amortization of only 35 per cent of the plaintiff's costs of construction, instead of 100 per cent of those costs which, the plaintiff claims, he should have permitted.
>
> In the case of Wickes Corp. *v.* United States (1952) 123 C Cls 741, 108 F Supp 616, we had the same problem. We discussed at length the history and the policy of the statute permitting rapid amortization. We concluded that the attempted 35 per cent limitation inserted in the necessity certificate in that case was invalid, as a contradiction of the statute. What we said in that case is applicable to this one.
>
> Defendant's motion for summary judgment is denied and plaintiff's motion is granted.

In the Wickes Case the court had held (also in an opinion by Judge Madden)

that the War Production Board had no power "to put the 35 per cent limit on the amount of the cost of the facilities on which amortization should be computed." It was ruled that the board's only function was to determine whether the facilities "were necessary in the interest of national defense during the emergency period." The court added that any attempt by the board to reduce the benefits, which Congress granted to the person whose facilities answered that description, was in violation of the statute. Chief Judge Jones dissented in both cases. *Ohio Power Co. v. United States, No. 218-54, March 1, 1955.*

Dixon-Yates Financing Plan Approved

MIDDLE SOUTH UTILITIES, INC., a holding company headed by E. H. Dixon, and The Southern Company, a holding company headed by E. A. Yates, have been authorized by the Securities and Exchange Commission to acquire the common stock to be issued by Mississippi Valley Generating Company, an electric company organized to furnish power under contract with the Atomic Energy Commission. The commission referred to the power contract, but held the question of its legality was essentially collateral in the context of its primary responsibilities under the Holding Company Act. It accepted the conclusions in favor of the legality of the contract arrived at by other federal authorities.

Debt Ratio

The stock would constitute about 5 per cent of the new capital structure. The remaining capital would be supplied from the sale of debt securities. Approval of the latter was to be sought subsequently. Objectors claimed that the proposed debt-equity ratio provided insufficient equity capital under the standards of the Holding Company Act. The commission rejected the argument, finding that the proposed ratio did not call for any special terms or conditions to protect investors, consumers, or the public. The financing had the approval of the commission of the state in which the company was organized and operating. Furthermore, under the power contract, the company was expected to get an income sufficient to service its debt.

The claim that the issuance of the common stock should not be approved in the absence of definitive terms of the company's proposed debt financing was also rejected. On prior occasions the commission has approved common stock financings, as preliminary steps in the launching of newly organized companies, without having before it the terms of the debt securities to be subsequently issued and sold. The issuance and sale of the debt securities and their terms will be the subject of future proceedings before the commission, and its jurisdiction with respect to them will not be limited by approval of the present application.

Stock Acquisition

The commission disagreed with the argument that the acquisition should be disapproved under § 10(b)(1) of the act because it would tend towards interlocking relations or the concentration of control detrimental to the public interest or the interest of investors or consumers. It said that Congress, in enacting the Atomic Energy Act of 1954, necessarily contemplated such interlocking relations and concentration of control as are inherent in a power contract between the Atomic En-

ergy Commission and a subsidiary of more than one registered holding company. Such relations and control are not, therefore, *ipso facto* detrimental to the public interest, within the meaning of the Holding Company Act.

Holding Company Integration Standards

Joint holding company ownership of a generating plant may be permitted within the integration standards of the Holding Company Act, according to the commission. There will be a direct physical interconnection between the operating company and one of the holding company systems immediately upon construction of the plant. There will be interconnections with the other system through existing facilities of the one system and the TVA. The facilities of the systems are capable of physical interconnection economically through the building of a transmission line. Pointing out that the performance of a long-term contract to supply power to the government is the reason for the acquisition, the commission said that the public interest in enabling government agencies to obtain their power requirements from a source selected by duly empowered federal instrumentalities is a consideration that it cannot disregard in applying the integration standards of the Holding Company Act.

Dissenting Opinion

Commissioner Rowen dissented on the ground that the acquisition by The Southern Company did not make for economic and efficient development of its utility system as required by the Holding Company Act. He concluded that the acquisition would not meet any present needs of that system for power, and that it was unrelated to its future development.

It did not appear to Commissioner Rowen that direct interconnection between the operating company and The Southern Company was possible economically. The statutory requirement that the operations of a system must be confined to "single area or region" would not, in his opinion, be satisfied. *Re Mississippi Valley Generating Co. File No. 70-3319, Release No. 12794, February 9, 1955.*

Interstate Commerce Commission's Intrastate Rail Rate Increase Reversed

THE United States district court set aside and enjoined an Interstate Commerce Commission order requiring railroads to increase intrastate freight rates. The mere existence of a disparity between interstate and intrastate rates did not authorize the commission to interfere with the rates established by the state regulatory body.

The state commission could validly fix a lower intrastate rate unless undue advantage and an unfair discrimination against interstate traffic would result. The provisions of the Interstate Commerce Act prohibiting preferences and discrimination in respect to interstate and intrastate rates did not automatically require complete uniformity in rates.

The Interstate Commerce Commission, said the court, could not exercise the power to nullify intrastate rates, unless certain things could be shown: Such rates must be abnormally low and not contribute a fair share of the revenues of the carriers involved; the disparity between rates must be substantial and must dis-

criminate against interstate commerce and result in injury to interstate shippers; the Interstate Commerce Commission's proposed rates must be reasonable and result in a substantial increase in the carrier's revenues.

The commission's findings were not substantiated since it had not separated the railroad's revenues, expenses, and properties between interstate and intrastate operations. The findings of the state body, familiar with intrastate freight rates, detracted heavily against the Interstate Commerce Commission's findings where its opinion differed from that of the federal body. Different conditions, circumstances, and situations in various states require and justify different results in fixing intrastate rates.

Competition is a factor that could not be ignored, either by the Interstate Commerce Commission or the reviewing court. Nor could the Interstate Commerce Commission disregard evidence that the passenger deficits in the state were less than those of the nation as a whole. *Mississippi Pub. Service Commission v. United States, 124 F Supp 809.*

Commission Rules on Rights to Individual and Corporate "Grandfather" Permits

A MARYLAND statute made all carriers of inflammable or combustible liquids in bulk in tank vehicles, subject to commission jurisdiction. A number of individuals, partnerships, and corporations filed applications for permits. The statute required the commission to issue a "grandfather" permit to any carrier actually in operation at the critical date set forth.

The commission passed upon the various applications with the thought in mind that the protection of the public from dangers inherent in the transportation of highly flammable liquids was paramount in the legislative mind. The usual reasons for regulation—public convenience and necessity—were only secondary considerations. This was borne out by the statute itself, which required proof of compliance with the commission's safety regulations and proof that the applicants had obtained public liability insurance.

The commission, in its permit deliberations, did not distinguish between common and contract carriers. Both were grouped together as public carriers. Therefore, permits were issued to all carriers in operation at the critical date who had complied with the statutory requirements.

With respect to the application of an individual who had subsequently formed two corporations and had applied for two separate permits, the commission was of the opinion that only one permit should be issued. The "grandfather" clause was intended to preserve the carrier businesses in existence at the time of the adoption of the statute, the commission said, and not to multiply them.

The individual then claimed that it made no particular difference under the "grandfather" clause who received the permit. The commission concluded, however, that since the individual had been operating as such at the critical date, the permit should be issued to him as an individual. To do otherwise would in effect perpetuate the carrier. Also, the statute contained no provision for the assignment or transfer of a certificate and made such certificate personal to the party who actually was in operation on the "grandfather" date. The same conclusion was reached with respect to the application of a part-

nership which had subsequently incorporated.

The commission reached a different result with respect to two corporations applying for two separate permits. Here, the commission found that both corporations were in existence on the critical date and that it had no authority to lump together applications by two corporations where each corporation met the strict literal statutory requirements.

The commission next considered to what extent the carriers entitled to permits under the "grandfather" clause would be allowed to conduct their operations under the permits issued. The purpose of the statute, the commission said, was to preserve rights in existence on the critical date, not to enlarge or multiply them, nor, except as required for the safety and protection of the public, to restrict or reduce them. Therefore, the character of the carrier's business on the critical date would be maintained in operating under its "grandfather" clause permit. A carrier whose business was solely by contract on that date would not be allowed to begin operations as a common carrier. Conversely, a common carrier would not be allowed suddenly to become a contract carrier. *Re Carriers of Inflammable or Combustible Liquids, in Tank Vehicles, Case No. 5364, Opinion and Order No. 51105, December 8, 1954.*

Cost of Capital Affects Water Rates

THE Connecticut commission, in authorizing a water rate increase, held that the company's return should be sufficient to assure confidence in its financial soundness, to maintain its credit, and to enable it to raise the money necessary for the proper discharge of its public duties. There is no single approach which is sufficient for all times and all companies, under all economic conditions, however, the commission said. In developing a suitable rate of return, attention necessarily should be given to the factors which determine the value investors place on the company's securities.

Comparable Return

The level at which rates for this or any other utility should be fixed, according to the commission, is measured by a determination whether these rates produce revenues which are sufficient to meet all reasonable operating expenses, including depreciation and taxes, and have remaining an operating income which, expressed as the ratio of those dollars to the dollars devoted to the public service, will approximate the ratio of similar dollars earned by similar companies attended by corresponding risks and uncertainties.

Return Allowance

The rates authorized were calculated to yield a return of about 5.55 per cent after giving effect to the issuance of additional shares of common stock, with the attendant changes in federal income tax liability after bond retirements. *Re Bridgeport Hydraulic Co. Docket No. 9013, January 26, 1955.*

Other Important Rulings

Deficiency Reduced. The West Virginia commission, in authorizing a natural gas company to increase rates to produce a return of 6.20 per cent, commented that

the amount requested by the company would be reduced where the company's claimed operating deficiency had been reduced by virtue of the pipeline supplier's withdrawal of a request to increase wholesale rates. *Re Hope Nat. Gas Co. Case No. 4086, November 5, 1954.*

Transfer of Certificate. The supreme court of appeals of Virginia held that the commission had no authority to issue a new certificate containing a point-of-origin restriction to a transferee seeking commission approval of the transfer of the existing certificate where the existing certificate contained no restriction and the carrier had complied with all commission rules as to transfer of such certificates. *Cook (Frank L.) Transfer v. Commonwealth of Virginia, 83 SE2d 733.*

Jeep Classified As Passenger Vehicle. The United States court of appeals, in allowing a railroad to recover additional freight charges, held that a motor vehicle, commonly known as a jeep, should be classified as a passenger vehicle for the purpose of determining railroad transportation charges under tariffs filed with the Interstate Commerce Commission. *United States v. Louisville & N. R. 217 F2d 307.*

Railroad Branch Discontinuance. The Pennsylvania superior court, in affirming a commission decision permitting a railroad to discontinue an unprofitable branch, noted that the questions involved in a service abandonment proceeding are administrative ones within the discretion of the commission. *Sherwood v. Pennsylvania Pub. Utility Commission, 109 A2d 220.*

No Injunction against Competitive Taxi Service. The New York supreme court refused to enjoin the operation of a competitive taxi service which operated between a large city and a mountain area where the service sought to be restrained did not constitute an omnibus line within the statutory definition. *Andy's Taxi Service Inc. v. Lawrence's Taxi Service, 136 NYS2d 330.*

Passenger Train Discontinuance. The New York supreme court affirmed a commission order denying a railroad's request for permission to discontinue the operation of certain passenger trains where discontinuance would leave cities served by these trains without through service during the daytime to the state capital, and where it would not be proper to permit the railroad to retain a lucrative freight business and disavow its obligation to provide adequate passenger service. *Delaware & Hudson R. Corp. v. New York Pub. Service Commission, 136 NYS2d 510.*

Denial of Rehearing. The New York commission held that the mere fact that a railroad, either through inadvertence or for some other reason, failed to present a proper and convincing case in a proceeding to discontinue certain services was not a ground for granting a rehearing. *Re New York C. R. Co. Case 16883, January 10, 1955.*

Agency Station Abandonment. A railroad was not allowed by the New York commission to change the status of a station to that of a nonagency freight station where the substantial revenues received and the distance to the nearest remaining stations, taken together, showed a public need for the continuance of the station. *Re Pennsylvania R. Co. Case Nos. 16978, 17032, January 10, 1955.*

Price Too Low for Property Sale. The New Jersey board would not approve the

sale and conveyance of certain property of a combined gas and electric company, even though the sale would not adversely affect the company's ability to furnish safe, adequate, and proper service, where the company could have sold the property for a higher price. *Re Public Service Electric & Gas Co. Docket No. 8309, January 12, 1955.*

Mixed Train Service Changed. A railroad was authorized by the North Dakota commission to change from daily to triweekly mixed service between certain points where little public demand existed for the daily service and the revenues produced were not sufficient to recoup the expenses incurred in operation. *Brotherhood of Locomotive Engineers v. Minneapolis, St. P. & S. Ste. M. R. Co. Case No. 5156, December 30, 1954.*

Commutation Fares Increased. The New Jersey board authorized a railroad to increase local passenger commutation fares 10 per cent with the maximum price of the unlimited monthly ticket not in excess of 40 times the one-way fare and at least a stated sum lower than the interstate fares for the same distance. *Re Delaware, L. & W. R. Co. Docket No. 8264, January 17, 1955.*

Titles and Index

Preprints in This Issue of Cases to Appear in
PUBLIC UTILITIES REPORTS

Titles

Index

CALIFORNIA PUBLIC UTILITIES COMMISSION

Re California Electric Power Company

Decision No. 50909, Application No. 34958 (Amended)
December 28, 1954

APPLICATION *by power company for authority to increase rates; granted.*

Evidence, § 3 — Judicial notice — Income tax changes.

1. A commission, when computing the reasonableness of an electric utility's rate increase application, may take official notice of the fact that under a newly enacted Internal Revenue Code, the federal normal income tax rate will decrease 5 percentage points, effective in the coming year, p. 36.

Return, § 25 — Comparative earnings — Electric companies.

2. While information relative to the earnings of other electric utilities on invested capital is informative and is a factor which can be considered, the commission, in fixing rates, will concern itself primarily with the determination of the fair return to be allowed on the investment which pertains to a particular applicant's intrastate electric operations, p. 36.

Return, § 87 — Electricity.

3. An electric utility was allowed a return of 6.25 per cent on its rate base in a proceeding in which a return of 6 per cent was found to be fair and reasonable, where it appeared that an additional allowance was necessary to compensate the company for an admitted down trend in return so that the company would be sure to earn a 6 per cent return in the future, p. 36.

Rates, § 171 — Uniformity — Electricity — Allocation of increase.

4. An electric company which did not seek a rate increase for service in one portion of its territory, in which its present rates were fixed at the same level as the rates of another company serving in the same area, was directed to apply part of a newly approved rate increase to this area in order to maintain a reasonable relationship between such rates and those to be authorized for service to customers in other parts of the company's territory, p. 38.

Rates, § 367 — Electric — Special service.

5. An electric company was directed to discontinue a rate schedule for what involved primarily energy exchange or special service to utilities or public agencies, where it appeared that the schedule already had been closed, that is, no new customers would be added on this schedule, and that the serving of this type of customers was not profitable to the utility and was unduly discriminatory to its other customers, p. 38.

Revenues, § 2 — Determination of net revenues.

Discussion of the method of determining net electric revenues after a rate increase by the use of a net-to-gross multiplier developed to reflect tax requirements, p. 35.

Rates, § 321 — Electricity — Company obligations.

Statement that an electric company should annually review its electric rate area boundaries and take the initiative in developing appropriate rate level zoning criteria by which customers may be transferred to more appropriate rate levels as future conditions or growth of the system make such transfers warranted, p. 40.

APPEARANCES: Henry W. Coil, Albert Cage, Donald J. Carman, H. M. Hammack, and Kenneth M. Lemon, for applicant; Brobeck, Phleger and Harrison by George D. Rives and Robert N. Lowry, for California Manufacturers Association, West End Chemical Company, Pacific Coast Borax Company, Hanford Foundry Company, Kaiser Steel Corp., Concrete Conduit Company; Overton, Lyman, Prince and Vermille by Wayne H. Knight, for Southwestern Portland Cement Company; Charles Goodwin, Clarence Alliman, George Spiegel, and Reuben Lozner, for Department of Defense and Executive Agencies of United States Government; Bruce Renwick, Rollin E. Woodbury, and John Bury by Rollin E. Woodbury, for Southern California Edison Company; J. J. Deuel, for California Farm Bureau Federation, interested parties; Shelby V. Langford, for city of Palm Springs; C. M. Brewer and Donald Stark, for Temescal Water Company; Whitney Reeve, for Ridgecrest residents, protestants; J. T. Phelps, Freyman Coleman, Charles W. Mors, and Theodore Stein, for the commission staff.

By the COMMISSION:

Nature of Proceeding

California Electric Power Company, by the above-entitled application filed December 14, 1953, as amended April 22, 1954, seeks an order of this commission authorizing increases in rates for electric service throughout its territory. Applicant originally sought a gross revenue increase of $1,330,900 annually, based upon the estimated level of business during 1954. However, since the filing of its application, applicant has been accorded certain rate relief[1] and presently seeks a gross revenue increase of $1,185,400.

Public Hearings

After due notice public hearings in the matter were held before Commissioner Kenneth Potter and examiner F. Everett Emerson on June 11, July 28, July 29, October 20, and October 21, 1954, in Los Angeles. The matter was submitted on the latter date.

Applicant's Position

Applicant avers that present electric rates do not now, nor will they in the foreseeable future, afford applicant a fair return upon the original cost or original cost depreciated of its property used and useful in the public service. Applicant further avers that present rates do not produce earnings sufficient to cover the full cost of operation and maintenance, depreciation, taxes, and return on its investment or

[1] Increases of $34,900 from sales to the U. S. Navy at Hawthorne and $20,000 from sales to Mineral County Power System, both in Nevada, as authorized by the Federal Power Commission, plus $90,367 from sales to the San Bernardino area as authorized by this commission's preliminary order herein, Decision No. 50505 (September 3, 1954).

its outstanding securities, or to maintain applicant's financial integrity and attract capital necessary for extensions, additions, and betterments required by the public service; or afford a return equivalent to that earned by other enterprises having corresponding risks or by others with which applicant must compete in the capital market.

Applicant seeks a rate of return of 6.25 per cent on a normalized basis. Its rate proposal is to increase present rates and charges, with certain exceptions, by 9.14 per cent and applicant has estimated that by so increasing its electric rates it will be afforded an annual gross revenue increase of about $1,185,400, an amount which it estimates will yield the rate of return sought. Applicant's proposal to increase rates by a flat percentage is predicated upon its understanding that such method is less objectionable to its customers than one involving increases on a kilowatt-hour basis.

Position of Other Parties

Only the applicant and commission staff introduced evidence as to the results of operation. A witness for customers of applicant in Ridgecrest, a community adjacent to the China Lake Naval Ordnance Test Station, presented a petition protesting any increase in the rates applicable for service in the Ridgecrest area. A review of the level of these rates and character of service reveals that they bear a reasonable relationship to the level of rates applicable for similar service in other areas on the applicant's system.

Protests against any further increases in rates were also received from the city of Palm Springs, the Keeler Women's Club, and the Mother's Club of Keeler. The last-named group based its protest principally upon the quality of service received. The commission has given careful consideration to these protests and has requested and obtained from applicant a report on service interruptions in Keeler. This latter matter will continue to have the commission's attention through its staff.

Results of Operations

Applicant, by means of 18 exhibits and the testimony of five witnesses, and the commission staff, by means of two exhibits and the testimony of nine witnesses, presented affirmative evidence respecting the results of applicant's operations. Other parties fully participated in the cross-examination of witnesses.

A summary of the estimated results of operations for the year 1954, as presented by applicant and the commission staff, is shown in the tabulation on page 36.

Based upon the "net-to-gross" multiplier of 2.182 developed by the commission staff to reflect tax requirements, applicant's requested increase in gross revenues of $1,185,400 would produce a net revenue increase of $543,300. The above net revenues when augmented by this amount and related to the above-tabulated rate bases would yield a rate of return of 6.28 per cent on applicant's basis and 6.26 per cent on the staff's basis.

In addition to that contained in the above tabulation, applicant and the staff presented similar information for the adjusted year 1953. For such year applicant indicated a rate of return of 5.83 per cent while the staff

Estimated Results of Operations, Year 1954

Item	Applicant Adjusted Year	CPUC Staff Estimated Average Year
Operating Revenues[a]	$15,914,900	$15,770,400
Operating Expenses		
Before Taxes	8,877,400[c]	8,881,500[c]
Taxes[b]	3,584,000	3,452,200
Total Operating Expenses	12,461,400	12,333,700
Net Revenue	3,453,500	3,436,700
Rate Base (depreciated)	63,670,000	63,596,000
Rate of Return	5.42%	5.40%

a. Including annualized effect of all rate increases authorized to date of submission.
b. Including federal income taxes at a composite rate of 52 per cent, based upon above operating revenues and their uncollectibles.
c. Does not include effect on gas fuel costs of rate increase granted Southern California Gas Company under Decision No. 50742 dated November 3, 1954.

study indicated a rate of return of 5.69 per cent. These rates of return are not directly comparable, however, as the staff's results were adjusted to reflect the 1954 wage level while applicant's results were not.

As can be seen from the above tabulation, the differences between applicant's and the staff's revenues, expenses, and rate base are relatively minor. The staff's estimate reflects adjustments for average temperature and precipitation whereas applicant did not make such adjustments. The difference between the applicant's and staff's estimates of operating expenses before taxes is negligible. The $74,000 difference in rate base reflects minor differences in several components. Subsequent to the hearings in this proceeding the commission has granted an increase in gas rates to Southern California Gas Company which, it is estimated, will increase applicant's production expenses by $32,000 on an annual basis.

We will adopt for purposes of this decision the following operating results for the estimated year 1954 at present electric rates and with federal income taxes computed at the present 52 per cent rate:

Operating revenue	$15,770,000
Total operating expenses	12,349,000
Net revenue	3,421,000
Rate base	63,630,000
Rate of return	5.38%

Federal Income Taxes

[1] The commission takes official notice of the fact that, under the Internal Revenue Code of 1954, the federal normal income tax rate will decrease 5 percentage points, effective April 1, 1955. The order herein will provide that applicant file tariff schedules, effective April 1, 1955, reflecting the indicated reduction in tax rate. The applicant may, however, file a supplemental application not later than March 1, 1955, requesting that the reduction in rates not be put into effect on April 1st and that the higher level of rates be continued, subject to refund, should it appear at that time that the present tax rate will be continued in effect.

Rate of Return

[2, 3] The record shows that applicant has financed its investment in

properties and other assets through the issue of bonds, shares of its preferred and common stock, and through the reinvestment of retained earnings. Exhibit 18 shows that applicant's capital structure as of December 31, 1953, consisted of the following:

Bonds	$37,250,000	54.5%
Preferred stock	10,188,150	14.9
Equity capital	20,863,206	30.6
Total	68,301,356	100.0

This exhibit also shows that the effective interest rate on the bonds and preferred stock outstanding on December 31, 1953, was 3.64 per cent, and that if consideration were given to the refunding in 1954 of applicant's 3⅞ per cent bonds through the use of proceeds from the issue of a like amount of 3¼ per cent bonds, the interest rate would be reduced to 3.53 per cent. The exhibit also shows that during the five years ended December 31, 1953, applicant paid an annual dividend of 60 cents a share on its outstanding common stock, that its earnings on common stock varied from a low of 44 cents a share in 1951 to a high of $1.10 a share in 1953, and that its earnings, expressed as a percentage of equity capital, varied from a low of 6.2 per cent in 1951 to a high of 13.1 per cent in 1953.

It is noted that applicant, as of December 31, 1953, had investments in securities of other companies totaling $8,892,802 and a net investment in nonutility properties of $1,721,458, as compared with a net investment in electric plant of $61,945,027; that its net operating income from utility operations was $2,900,180 in 1952 and $2,930,523 in 1953, as compared with income from investments and nonutility operations of $469,068 in 1952 and $1,393,828 in 1953. It is thus apparent that applicant's over-all results of operation have been materially affected by its investment in and income from sources other than its electric utility operations.

In this proceeding applicant, in support of its request for a 6.25 per cent return, introduced an exhibit showing the returns realized on invested capital by 54 electric utility companies in the United States whose bonds are rated single A by Moody's Investment Service. The exhibit shows that the 54 selected companies earned an average of 6.35 per cent on their invested capital over the 3-year period 1951, 1952, and 1953.

While information relative to the earnings of other electric utilities on their invested capital is informative and is a factor which can be considered, it is the practice of this commission in fixing rates to concern itself primarily with the determination of the fair return to be allowed on the investment in rate base which pertains to applicant's electric operations in California. We find that 6 per cent is a fair and reasonable rate of return for applicant to earn in the future on its California electric operations. To compensate for an admitted down trend in rate of return and in order that applicant may earn such 6 per cent return for the future, a 6.25 per cent rate of return will be applied to the adopted rate base of $63,630,000 for the estimated year 1954, which rate base we find to be reasonable. This results in an additional net revenue requirement of $553,000, or an additional gross revenue requirement of $1,207,000, based upon a 52 per cent

federal income tax rate. The electric rates hereinafter authorized should yield such revenues. The $1,207,000 compares with applicant's request of $1,185,400 plus provision for a $32,000 fuel price increase.

Spread of Rates

[4, 5] Applicant does not propose any increase at this time in the rates to resale customers; in the rates applicable to Hawthorne Naval Ammunition Depot and Mineral County Power System, which rates were recently fixed by the Federal Power Commission; nor in the rates and charges for interchange and interdivisional service.

By Decision No. 50505 in this proceeding, applicant's rates for service in the San Bernardino area were fixed at the same level as the rates for Southern California Edison Company in that area. Applicant seeks no further increase in these rates. It is our opinion that the rates for the San Bernardino area service should be increased above the level of existing rates in order to maintain a reasonable relationship between such rates and those to be authorized for service to customers in other areas served by applicant.

The required increase of $1,207,000 in gross revenues will be accomplished by applying an 8.79 per cent increase to all present rates other than schedules effective in the San Bernardino area, the resale schedule, the Mineral county and Hawthorne service, interchange service, and interdivisional operations.

The rates presently effective in the San Bernardino area (Schedules A–4, A–5, D–1, H–1, P–1–C, and P–1–D) as authorized by Decision No. 50505, should be increased by 6.80 per cent, which would be equivalent to an increase of 8.79 per cent over the level of rates authorized in 1951 by our Decision No. 46397, 93 PUR NS 428. We shall authorize such an increase in these schedules. By so doing applicant's other customers will experience no burden through allocation of the increases herein authorized even though applicant may find it necessary to retain its present rates and charges in view of the lower rates authorized for the Southern California Edison Company in the San Bernardino area. If applicant is unable to effect increases in these schedules, it is estimated that the increase in revenues it will receive under a full year's application of the new rates, based on 1954 estimated, will be about $83,000 less than the $1,207,000 herein authorized.

Applicant now serves six customers under contracts in which the rate is a filed tariff. These customers are:

Customer	Rate
Industrial Electrica Mexicana	P–3
Kaiser Company Inc.	P–2
Edwards Air Force Base	P–2
Naval Ordnance Test Station —Inyokern	P–2 and C–2
County of San Bernardino Housing Authority	A–4
Mojave Weather Station	C–2

Such rates and charges as are being authorized for these tariff schedules will be applied to such contract customers.

Applicant also furnishes service to three customers under contracts at other than filed tariff schedules. These involve primarily energy interchange or special service to the following utilities and public agency:

City of Los Angeles—Interchange
San Diego Gas & Electric Company—Interchange
Imperial Irrigation District—Standby for Coachella

No increase will be authorized in these rates at this time.

Applicant's existing Schedule PA–2 provides for a combination of meter readings for billing purposes. Such schedule is a "closed" schedule; that is, no new customers may be served under it. The schedule is now applicable to only a few customers, among whom is Temescal Water Company. This water company is supplied by means of a "subdistribution" system, covering a distance approximating 9 miles or more in length, on which conjunctive billing is applied to many meter readings. Witnesses for Temescal protested any increase in electric rates to such system and indicated that, if increased power costs made it necessary, the water company would undertake pumping by other than electric motors. The evidence in this proceeding indicates that the serving of this type of customer is not now profitable and is unduly discriminatory and we so find. Applicant will be directed to discontinue its Schedule PA–2 and to cease combining meter readings for billing purposes on all other schedules as of October 1, 1956, and to transfer customers now being served on Schedule PA–2 to other appropriate rate schedules.

Schedule Designation

Uniformity in schedule designation among electric utilities appears desirable. For this purpose it appears appropriate that the General Service schedules presently using the "C" series of numbers be refiled using an "A" series of numbers. Applicant now uses the "GP" series of numbers to designate Power-General Pumping Service. Since this is primarily a power schedule, use of the "P" series of numbers is indicated. It also seems appropriate to redesignate the "PMP" series of numbers for Power-Municipal Pumping to a "PM" series. Applicant renders resale service under Schedule P–3, which will be redesignated as an "R" schedule. Applicant's present terminology for the remainder of the schedules appears reasonable and should be continued, except that all references to territory served now contained in the title of rate schedules should be deleted and confined to the body of the schedule.

The letter and number of designations being adopted herein for the schedules mentioned above are as follows:

Title	Authorized Schedules Nos.	Present Schedule Nos.
General Service	A–1, A–2, A–3	C–1, C–2, C–3
Power—General Pumping Service	P–3	GP–1
Power—General Pumping Service	P–4	GP–3
Power—Municipal Pump. Service	PM–1, PM–2	PMP–1, PMP–2
Resale Service	R	P–3

Applicant should annually review its electric rate area boundaries and take the initiative in developing appropriate rate level zoning criteria by which customers may be transferred to more appropriate rate levels as future conditions or growth of the system may indicate such transfers to be warranted.

UNITED STATES SUPREME COURT

Latham Castle, Attorney General of State of Illinois

v.

Hayes Freight Lines, Inc.

No. 44
— US —, 99 L ed —, 75 S Ct 191
December 6, 1954

REVIEW *of decision by Illinois Supreme Court in interstate motor carrier's action to restrain state officials from suspending right to use state highways; affirmed. For lower court case, see (1954) 2 Ill2d 58, 117 NE2d 106.*

Interstate commerce, § 38 — Powers of states — Federal powers — Carriers.

1. A state may not determine what motor carriers can or cannot operate in interstate commerce since the federal government has exclusive power to make such determination, p. 41.

Interstate commerce, § 46 — Motor carriers — Power of state to suspend operating rights.

2. A state may not suspend the right of an interstate motor carrier to use its highways for interstate transportation of goods because of repeated violations of the state's weight and load regulations, p. 42.

Interstate commerce, § 38 — Motor carriers — Powers reserved to state — Weight and load of trucks.

3. A state's regulation of weight and distribution of loads carried in interstate trucks does not conflict with the Federal Motor Carrier Act, which leaves states free to regulate sizes and weights of motor vehicles, p. 42.

Certificates, § 5.2 — Powers of Interstate Commerce Commission — Power to revoke certificate.

4. The Interstate Commerce Commission may, either on its own initiative or on complaint by a state, suspend or revoke a carrier's certificate of public convenience and necessity where the carrier has persistently and repeatedly violated state laws, p. 42.

APPEARANCES: John L. Davidson, Jr., of Springfield, Illinois, argued the cause for petitioners; David Axelrod, of Chicago, Illinois, argued the cause for respondent.

Mr. Justice BLACK delivered the opinion of the court: This case raises important questions concerning the power of states to bar interstate motor carriers from use of state roads as punishment for repeated violations of state highway regulations. The respondent Hayes Freight Lines, Inc., is such a carrier transporting goods to and from many points in Illinois and seven other states.[1] This extensive interstate business is done under a certificate of convenience and necessity issued by the Interstate Commerce Commission under authority of the Federal Motor Carrier Act.[2] Hayes also does an intrastate carrier business in Illinois under a certificate issued by state authorities. Illinois has a statute which limits the weight of freight that can be carried in commercial trucks over Illinois highways; the same statute also provides for a balanced distribution of freight loads in relation to the truck's axles.[3] Repeated violations of these provisions by trucks of a carrier are made punishable by total suspension of the carrier's right to use Illinois state highways for periods of ninety days and one year.[4] This action was brought in a state court to restrain Illinois officials from prosecuting Hayes as a repeated violator. The state supreme court held that the punishment of suspension provided by the state statute could not be imposed on the interstate operations of the respondent Hayes. Such a state suspension of interstate transportation, it was decided, would conflict with the Federal Motor Carrier Act which is the supreme law of the land.[5] We granted the state's petition for certiorari. (1954) 347 US 1009, 98 L ed 1133, 74 S Ct 865.

[1] Congress in the Motor Carrier Act adopted a comprehensive plan for regulating the carriage of goods by motor truck in interstate commerce. The federal plan of control was so all-embracing that former power of states over interstate motor carriers was greatly reduced. No power at all was left in states to determine what carriers could or could not operate in interstate commerce. Exclusive power of the federal government to make this determination is shown by § 306 of 49 USCA which describes the conditions under which the Interstate Commerce Commission can issue certificates of convenience and necessity. And § 312 of the same title provides that all certificates, permits, or licenses issued by the commission "shall remain in effect until suspended or terminated as herein provided." But in order to provide stability for operating rights of carriers, Congress placed within very narrow limits the commission's power to suspend or revoke an outstanding certificate. No cer-

[1] Indiana, Missouri, Michigan, Pennsylvania, Ohio, Kentucky, and Tennessee.

[2] 49 Stat 543. Now Part II of the Interstate Commerce Act, 54 Stat 919, 49 USCA §§ 301 et seq.

[3] Ill Rev Stats 1953, Chap 95½, § 228.

[4] Ill Rev Stats 1953, Chap 95½, § 229b. This section provides for a 90-day suspension upon a finding of 10 or more violations. If thereafter the same carrier is found to have been guilty of 10 or more later violations the suspension is for one year.

[5] (1954) 2 Ill2d 58, 117 NE2d 106. But the state supreme court held that Hayes' intrastate operations could be suspended. Hayes appealed to this court. We dismissed for want of a substantial federal question. (1954) 347 US 994, 98 L ed 1127, 74 S Ct 866.

tificate is to be revoked, suspended, or changed until after a hearing and a finding that a carrier has willfully failed to comply with the provisions of the Motor Carrier Act or with regulations properly promulgated under it.[6] Under these circumstances, it would be odd if a state could take action amounting to a suspension or revocation of an interstate carrier's commission-granted right to operate. Cf. Hill v. Florida ex rel. Watson (1945) 325 US 538, 89 L ed 1782, 65 S Ct 1373. It cannot be doubted that suspension of this common carrier's right to use Illinois highways is the equivalent of a partial suspension of its federally granted certificate. The highways of Illinois are not only used by Hayes to transport interstate goods to and from that state but are also used as connecting links to points in other states which the commission has authorized Hayes to serve. Consequently if the 90-day or the one-year suspension should become effective, the carriage of interstate goods into Illinois and other states would be seriously disrupted.

[2, 3] That Illinois seeks to punish Hayes for violations of its road regulations does not justify this disruption of federally granted rights. A state's regulation of weight and distribution of loads carried in interstate trucks does not itself conflict with the Federal Act. The reason for this, as pointed out in Maurer v. Hamilton (1940) 309 US 598, 84 L ed 969, 60 S Ct 726, 135 ALR 1347, is that the Federal Act has a provision designed to leave states free to regulate the sizes and weights of motor vehicles. But it would stretch this statutory provision too much to say that it also allowed states to revoke or suspend the right of interstate motor carriers for violation of state highway regulations.

[4] It is urged that without power to impose punishment by suspension states will be without appropriate remedies to enforce their laws against recalcitrant motor carriers. We are not persuaded, however, that the conventional forms of punishment are inadequate to protect states from overweighted or improperly loaded motor trucks. Moreover, a commission regulation requires motor carriers to abide by valid state highway regulations.[7] And as previously pointed out, the commission can revoke in whole or in part certificates of motor carriers which willfully refuse to comply with any lawful regulation of the commission.[8] If, therefore, motor carriers persistently and repeatedly violate the laws of a state, we know of no reason why the commission may not protect the state's interest, either on the commission's own initiative or on complaint of the state.[9]

We agree with the supreme court

[6] Smith Bros., Revocation of Certificate '33 MCC 465, 472. See United States v. Seatrain Lines (1947) 329 US 424, 67 PUR NS 516, 91 L ed 396, 67 S Ct 435.

[7] 49 CFR, 1954 Cum Supp, § 192.3. "Every motor vehicle shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless such laws, ordinances, and regulations are at variance with specific regulations of this commission which impose a greater affirmative obligation or restraint."

[8] 49 Stat 555, 49 USCA § 312.

[9] 49 Stat 555, 49 USCA § 312. For cases in which the commission has considered violations of state law in passing on the fitness and ability of applicants to operate as carriers in interstate commerce see Southwest Freight Lines, Extension-Glass Products (1952) 54 MCC 205, 219; Hayes Freight Lines, Extension-Alternate Routes in Michigan (1952) 54 MCC 643, 659.

of Illinois that the right of this carrier to use Illinois highways for interstate transportation of goods cannot be suspended by Illinois.

Affirmed.

NORTH CAROLINA UTILITIES COMMISSION

Re Southern Bell Telephone & Telegraph Company

Docket No. P-55 Sub 30
December 17, 1954; rehearing denied January 25, 1955

RECONSIDERATION *by commission, after remand by court, of telephone company's application for rate increase; additional revenues authorized.*

Rates, § 647 — Motion to amend petition.

1. A motion to amend an original petition for a rate increase, made by a telephone company after the court has remanded the commission's order on the original petition for findings in accordance with the opinion, is a proper one and will be allowed where the motion seeks to have the commission consider the company's future needs and the commission, in order to determine the proper rate base and appropriate return allowance, must consider the latest available evidence, p. 46.

Valuation, § 21 — Fair value rate base — Factors considered.

2. The commission, in determining a telephone company's fair value rate base, should consider, among other things, the characteristics of the territory served, the present and prospective service needs, the company's history, the adequacy of the company's organization, the quality and extent of the service, corporate or contractual relations, suitability of the facilities, original cost, current cost, plant depreciation, and the company's financial history, p. 48.

Return, § 26.1 — Consideration of capital structure — Equity and debt ratios.

3. The commission will take cognizance of the division between debt and equity capital in arriving at the return to be allowed a company and, generally speaking, will not consider a 33⅓ per cent debt ratio out of proportion for a telephone company, p. 52.

Expenses, § 114 — Income tax reduction — Accelerated depreciation — Adjustment to reflect.

4. A telephone company's test period operating results should not be adjusted to reflect theoretical reductions in income tax payments available by adoption of accelerated depreciation provisions, since to allow such adjustment would be to resolve prematurely the complex issues inherent in what action, if any, the company should take as a result of the new tax provisions, p. 53.

Return, § 111 — Telephone company.

5. A return of 6 per cent on a fair value rate base was considered fair and reasonable for a telephone company, p. 53.

APPEARANCES: For the Petitioner, Southern Bell Telephone and Telegraph Company: William T. Joyner, Attorney at Law, and Robert C. Howison, Attorney at Law, of the law firm of Joyner and Howison, Raleigh; H. P. Taylor, Attorney at Law, Wadesboro; F. Grainger Pierce, Attorney at Law, Charlotte; Jefferson Davis, Attorney at Law, Atlanta, Georgia; Dan M. Byrd, Jr., Attorney at Law, Atlanta, Georgia; Drury Thompson, Attorney at Law, Atlanta, Georgia.

For the Protestants: The State of North Carolina and The Department of Justice; The State of North Carolina and the public interest: I. Beverly Lake, Assistant Attorney General of North Carolina, Raleigh; John Hill Paylor, Assistant Attorney General assigned to the commission, Raleigh; Samuel Behrends, Jr., Attorney at Law, Office of Attorney General, Raleigh.

MCMAHAN, Commissioner: By an original petition filed on June 21, 1952, and amended by a substitute petition filed on September 25, 1952, the Southern Bell Telephone and Telegraph Company, hereinafter sometimes referred to as the petitioner, Southern Bell, or the company, sought authority from the North Carolina Utilities Commission, hereinafter referred to as the commission, to increase its rates and charges in the state of North Carolina by the gross amount of $3,426,000. The petition alleged that throughout the past two years, which immediately preceded the filing of the same, and specifically since the middle of 1950, after the commission's last extensive investigation into all the circumstances affecting the petitioner's operations, economic factors over which neither the petitioner nor the commission had any control, steadily and drastically have increased the costs of providing telephone service in North Carolina; that there have been necessary and substantial wage and salary increases; three increases in the federal corporate income tax rates; an increase in the social security tax rate; as well as other direct and indirect increases in the cost of providing service; that the heavy demand for telephone service in North Carolina has continued (notwithstanding the fact that the petitioner has added to and expanded its facilities at an unprecedented rate); that the over-all impact of rising cost factors, and the addition of large quantities of new facilities at higher price levels (have rapidly increased the petitioner's average investment per telephone throughout the period), and have caused and will continue to cause, a depressing effect upon the petitioner's rate of return so long as the cost of adding new telephones exceeds the average cost of telephones in service; and that for these reasons, as well as other reasons detailed and specifically set forth in the petition, it has been necessary for the petitioner to make petition for an increase in its rates as applied for.

The petition was protested by the office of the attorney general of North Carolina, acting for and in behalf of

the department of justice and the state of North Carolina in the public interest, and by their protests, the protestants contended that the earnings of the petitioner were adequate and sufficient to meet all its financial needs, and to attract additional capital for the purpose of expanding and improving its facilities.

The cause came on for hearing before the commission on October 28, 1952; the hearing being later recessed, reconvened, and concluded on December 30, 1952. Thereafter on April 21, 1953, the commission entered an order fixing as a rate base for the company, the net investment in property used and useful in rendering service in North Carolina, at the end of the test period which was July 31, 1952, and amounting to $68,599,569. The order of the commission found that a rate of return of 6 per cent on said net investment would be appropriate, although it stated that: "The commission has some reservations as to the ability of the petitioner to carry out its expansion in North Carolina for the year 1953, and earn a rate of return of 6 per cent for the year"—on the rate base above set forth, an additional gross of $1,648,056 was required to yield a return of 6 per cent. The commission thus directed the petitioner to file a schedule of rates which would produce an additional gross revenue of $1,648,056, of which amount $891,000 to be provided from intrastate toll service, and $757,056 from other classes of service within the state; these rates to be applied on stations in operation as of July 31, 1952.

Upon the rendition of this order and its service upon all parties concerned, both the petitioner and the protestants filed a petition for a rehearing of the cause by the commission; both petitions were denied, and from the denial thereof, the petitioner and the protestants appealed to the superior court of North Carolina. The record was certified to the superior court of Mecklenburg county (the county in which the company maintains its principal office within the state), and came on for hearing before the Honorable William H. Bobbitt (then the resident superior court judge of the fourteenth judicial district), who, after hearing arguments of all parties to the same, entered a judgment remanding the proceeding to the commission for further findings and for action in conformity with the judgment entered—said judgment being a part of the record in this cause. From this judgment the protestants appealed to the supreme court of North Carolina, and the appeal of the same was heard at the fall term 1953 of the said supreme court. The ruling and opinion of the supreme court of North Carolina was filed and handed down on January 29, 1954, and by the same the court modified and affirmed the judgment of the superior court.

The opinion of the supreme court in this cause is contained in (1954) 239 NC 333, 3 PUR3d 307, 317, 320, 80 SE2d 133, and in modifying and affirming the judgment of the superior court, the supreme court remanded the cause back to the commission for the purpose of arriving at and determining a rate base which is the fair value of the company's property devoted to public service, used and useful in providing its service in the state of North Carolina, the court saying:

"The legislature, in using the term 'value,' in GS § 62–124, was not referring to the original or the replacement cost or to the exchange or sale price it would command, as used or secondhand property, on the market. It had reference to the value of the property actually in use, serving its purpose as a part of a composite public utility earning an income for its owner. It is, of course, in the main, 'used' or 'secondhand,' but it is not for exchange or sale, as such. It is actually in use and will continue in use until it becomes obsolete or outworn. Its value, under these circumstances, is the value the commission must seek to determine as the rate base for ascertaining what is a just and reasonable schedule of rates to be approved by it."

And in this connection, the court further said:

"Strictly speaking, what is the fair value of the applicant's investment in its intrastate business in this state, and what constitutes a fair return thereon, are the primary questions before the commission for decision."

And, further, the court said:

"It is the prerogative of that agency"—the commission—"to decide that question"—the rates to be prescribed —. "It is an agency composed of men of special knowledge, observation, and experience in their field, and it has at hand a staff trained for this type of work. And the law imposes on it, not us"—the court—, "the duty to fix rates."

Thus, the matter is now before the commission upon the remand from the courts, with the directive to arrive at and fix a rate base that represents the fair value of the petitioner's property, used and useful, in providing telephone service throughout the area it serves in North Carolina, and to allow thereon a fair and reasonable rate of return, all in conformity with the Statutes of North Carolina, which authorize and direct the commission to fix rates and charges for public utilities.

[1] After the cause had been remanded to the commission, and when the same came on for hearing, the petitioner, under date of June 21, 1954, made motion in the cause, that it be allowed to amend its petition originally filed, and by said motion contends: That the $1,648,056 additional annual gross revenue provided by the commission's order of April 21, 1953, was made effective on and after April 26, 1953; that the rates designed to produce such additional revenue are now in effect on intrastate service provided by the petitioner; that for the purpose of this further hearing the commission has directed, by an order, that a new test period for arriving at the financial status of the petitioner be used, the same being the twelve months' period ending March 31, 1954; that based upon this test period, the petitioner alleges the minimum fair value of its property to be $92,808,462, exclusive of cash requirements, materials and supplies, and construction work in progress on which interest is capitalized; and it alleges that its earnings on the minimum fair value of its property for the test period were only 4.59 per cent, and that a fair rate of return on such fair value is from 6.75 to 7 per cent. It, therefore, prays that its petition, as heretofore amended, be further amended to pray that: (1) The commission determine the amount of addi-

tional annual gross revenue necessary to produce for a reasonable future period, from and after the date of the commission's order in this case, a fair rate of return on the fair value of the company's property; and (2) upon such determination, the commission, pursuant to North Carolina General Statute 62–127, fix a schedule of rates and charges as will produce for the future, subsequent to the date of the commission's order, a fair rate of return on the fair value of the property.

The motion of the petitioner was objected to by the protestants: "For the reason that the case is now before the commission on an order of the superior court of Mecklenburg county pursuant to the opinion of the supreme court and the appeal from this commission's former order, and we submit that the function of the commission here is to carry out the mandate of the courts; and the commission cannot, and should not, allow an amendment which will vary from that mandate of the court. If the motion does not depart from the mandate of the court, it is unnecessary, if it does we submit that it is improper."

After considerable discussion on the part of counsel for both sides and in response to the questions asked by various members of the commission, Chairman Winborne entered the following ruling on the motion: "It is the ruling of the commission on this motion that the motion be allowed in so far as it does not conflict with the decision of the supreme court in this matter and if any part thereof is in conflict with the supreme court, it is disallowed."

It is the opinion of the commission that the motion of the petitioner is a proper one, and that it does not conflict with the decision of the supreme court in this cause; for that the motion in essence is a request for the commission to pass upon the necessity of the petitioner being allowed sufficient rates and charges from its subscribers, to enable it to earn a reasonable return upon the fair value of its property devoted to public service in North Carolina as of this time; to determine whether or not the petitioner is entitled to greater earnings and more gross revenue than it now receives, and to determine in what amount, if any, rates must be increased to produce the same. In order to determine what a proper rate base, or the fair value of the petitioner's property is, and the appropriate rate of return it should earn thereon, the commission must have evidence on the same from the latest available test period, since the rates it will prescribe are for the future. We, therefore, hold that the motion is a proper one and it is allowed.

The evidence in this cause offered by the petitioner and the protestants is most voluminous. It required two periods of hearings running over many days for the witnesses to testify the facts and give expert opinions designed to aid and guide the commission in arriving at proper findings of fact, and to arrive at a just and proper conclusion as to the contentions made by all parties. Many exhibits were offered and received in evidence, all of which detailed, explained, and illustrated the evidence and contentions of the parties, as well as set forth concisely statistical information, facts, and figures for the use of the commission in arriving at its decision, and in

entering an appropriate order herein. Ordinarily, some summarization or recapitulation of evidence taken in a hearing before the commission is made in the order; this being for the purpose of familiarizing the interested parties, or the court (if on appeal), with the most important evidence, and that from which the commission finds its facts and draws its conclusions. To adequately and properly point out the important aspects of the evidence in this case would require narration of virtually all the testimony taken and the exhibits offered. It would serve no useful purpose to attempt to summarize or recapitulate all the large volume of testimony and exhibits in this record; and to deal with a part (eliminating the rest) would present a false impression as to the importance of certain of the testimony and exhibits dealt with, over those which were not summarized. Therefore, this order will not attempt to recite any testimony or exhibits (except in a general way), but will use only that which is sufficient to bring out the contentions of the parties and support the findings of the commission. The entire testimony has been reduced to transcript and it, together with all exhibits, are a matter of record in this cause available to all parties of interest and to the courts, if and when necessary.

The task of the commission in this proceeding resolves itself around three findings to make:

(1) What is the proper rate base, or what is the fair value of the petitioner's property used in rendering service in North Carolina?

(2) Is the petitioner now earning a sufficient rate of return on the fair value of its property devoted to public service in North Carolina?

(3) If not, what is a proper rate of return on the fair value of its property, and how much additional gross revenue will it require to enable it to earn such a rate of return on the said fair value of its property in North Carolina?

Rate Base

[2] What is the fair value of the petitioner's property used and useful in rendering intrastate service to its subscribers in North Carolina?

The supreme court of North Carolina points out that in fixing maximum rates or charges, or tariffs of rates or charges, the commission shall take into consideration, if proved (or may require proof of), the value of the property used for the public, and that it shall furthermore consider the original cost of construction thereof, and the amount expended in making improvements thereon, and the present cost compared with the original cost of construction of all of its property within the state. The court states further that in this proceeding (State of North Carolina ex rel. Utilities Commission v. Southern Bell Teleph. & Teleg. Co. (1954) 239 NC 333, 3 PUR3d 307, 316, 317, 80 SE2d 133) the pattern for solution could be found in the North Carolina statutes as well as in the case of Smyth v. Ames (1898) 169 US 466, 42 L ed 819, 18 S Ct 418, about which the court says: "The language of our statute is lifted almost verbatim out of the opinion in that case." The court further says: "In finding these essential, ultimate facts, the commission must consider all the factors particu-

larized in the statute and 'all other facts that will enable it to determine what are reasonable and just rates, charges, and tariffs, GS § 62–124.' It must then arrive at its own independent conclusion without reference to any specific formula as to: (1) what constitutes a fair value for rate-making purposes, of applicant's investment used in rendering intrastate service—the Rate Base; and (2) what rate of return on the predetermined Rate Base will constitute a rate that is just and reasonable both to the applicant and to the public. While both original cost and replacement value are to be considered, neither constitutes a proper Rate Base."

The company offered testimony and exhibits tending to establish the original costs, current (present) costs, current costs less observed depreciation, and the fair value of its property used and useful in rendering intrastate service in North Carolina. This evidence given in compliance with the statutes is all stated in terms as of the end of period figures, that is as of March 31, 1954, the end of the period as established by order of the commission. The testimony and exhibits of the witnesses detailed the manner in which they arrived at these amounts, and all the figures are exclusive of materials and supplies, cash requirements, and construction work on which interest is capitalized. The type of amount and each amount is as follows:

(1) Original cost	$102,410,341
(2) Current (present) cost	118,305,138
(3) Current cost less observed depreciation	98,614,294
(4) Fair value (being the opinion of witness Bradbury)	92,808,462

The protestants offered testimony and exhibits tending to establish its contentions as to what the rate base for the company, according to the test period, was. The testimony and exhibits of the protestants determined the manner in which they arrived at the same, and such are exclusive of materials and supplies, cash requirements, and construction work on which interest is capitalized. Such testimony and exhibits show that the total average net investment in telephone plant (average, meaning over the twelve months' period ended March 31, 1954), to be $78,132,981. The original cost or the net investment in telephone plant in North Carolina at the end of the test period (March 31, 1954) was $84,779,611.

A witness for the protestants, David M. Kosh, testifying as an expert and analyzing the data which he presented, indicated a fair rate of return to the Southern Bell as one of not more than 6 per cent to be applied to a rate base substantially equal to net original cost. On cross-examination he testified that the highest original type cost of rate base would be 105 per cent of net investment. (Net investment, the investment at the end of the period—March 31, 1954, amounting to $84,779,611.) Mr. Kosh's formula of 105 per cent would make the highest original type of rate base (105 per cent x $84,779,611) of $89,018,592.

The above figures represent the various totals in dollars of all the evidence offered by the petitioner and the protestants touching on the question of what is the fair value of the petitioner's property, used and useful in rendering intrastate service in North Carolina as of March 31, 1954. The

commission is admonished and instructed by the supreme court to consider all of these various elements which go to produce types of amounts for a rate base, but "then arrive at its own independent conclusion without reference to any specific formula, as to . . . what constitutes a fair value for rate-making purposes, . . ."—thus, this question becomes one of judgment for the commission after considering all of the evidence.

The only evidence which sets forth a specified amount as being the fair value of the petitioner's property, is the testimony of the opinion of the company's witness, J. D. Bradbury. Mr. Bradbury ascertained the fair value by considering: Current cost, that is present cost (as of March 31, 1954) as arrived at by witness B. F. Hatfield, less observed depreciation as given by witness Ralph C. Pate, and taking into consideration eleven elements which he listed as bearing on the value of the property, but to which he stated he gave no specified fixed amount, in arriving at fair value. These eleven elements are:

(1) the characteristics of the territory served;

(2) the present and prospective service needs of the territory;

(3) the general history of the company and its operations;

(4) the adequacy of the company's organization as to the number of people, their skill, morale, and loyalty;

(5) the quality and extent of the service;

(6) such corporate or contractual relationships that will affect the fair value of the property;

(7) the suitability of the facilities to give the service demanded and needed;

(8) the original cost of the property;

(9) what the current cost of the property is and present prices of material, labor, and other economic factors;

(10) the condition of the plant, that is, the amount of depreciation existing in the plant;

(11) the financial history of the company, its capital structure, and other relevant facts or factors that might influence or have some effect on the value of the property at a particular time.

All this, the commission has considered as well as the other type of amounts listed above, and the manner in which they are arrived at.

The evidence discloses that approximately 75 per cent of all the petitioner's property has been placed in service since 1946. The commission has weighed the fact that three-fourths of the property was acquired on a constantly rising market, while one-fourth was acquired on a more stable and less inflationary market. It has given consideration to the fact that some $4,000,000 of the company's property was put in service during the latter part of the test period for this case, and thus investment therein should equal the value of such property. It has given consideration to the testimony of a witness for the state, whose formula places the highest original cost type of rate base at $89,018,592, and to the fact that the net average investment was $84,779,611 in property at the end of the period; and the net average investment was $78,132,981. It has endeavored

to weigh every element of all the testimony and of the various components which go to make up the type of amount of rate base suggested by the evidence; and from all such, it has come to the conclusion, unanimously agreed upon by every member of the commission, that the fair value of the petitioner's property used and useful in rendering intrastate service in North Carolina and for rate-making purposes is $89,000,000.

Rate of Return

Is the petitioner now earning a sufficient rate of return on the fair value of its property devoted to public service in North Carolina? If not, what is a proper rate of return for the petitioner to earn, and how much additional gross revenue will it require to enable it to earn such a rate of return on the fair value of its property in North Carolina?

The evidence discloses (and there is no dispute between the petitioner and the protestants as to the same), that for the twelve months period ended March 31, 1954, the company's rate of return on its average net investment, after making accounting and pro forma adjustments, was 5.29 per cent for its intrastate operations in the state of North Carolina. The net operating income of the company on a going level as of March 31, 1954, on which there is no dispute, was $4,255,290, and thus the rate of return which the company was earning at the end of the period, March 31, 1954, on the rate base found by the commission to be the fair value of the company's property as of that date ($89,000,000) was 4.78 per cent. The evidence indicates that the company's cost per new station added is greater than the average cost of old stations in service; that the company's construction program for 1954 and 1955, necessary to meet the demands for service will continue at such high levels as to result in a higher cost per station added than the average cost of old stations in service; that this will produce a continuing depression of the company's rate of return for the future. The evidence also indicates that the rate of return is now being depressed at a rate of .033 per cent per month; that this will continue, although perhaps at a diminishing amount if costs remain on a level or decline, until such time arrives that the cost per station added does not exceed the cost of old stations in service. This being true, the company's rate of return has diminished in the eight months since the end of the test period (March 31, 1954), and up to the 1st of December, 1954, by .254 per cent; and its rate of return on the rate base found to be the fair value of the petitioner's property, $89,000,000 was 4.526 per cent as of December 1, 1954.

The company contends that it must have a rate of return of not less than 6.75 per cent on the fair value of its property (which it contends is $92,808,462) in order to enable it to remain financially stable, to attract necessary capital to carry on its program of improving and expanding its services, and to render the type of service it is obligated to furnish its subscribers in North Carolina. It further contends that it will take such a rate of return to enable the company to take care of its capital requirements, preserve the integrity of its credit, build up adequate and sufficient surplus and

reserve, and earn that rate which it is legally and rightfully entitled to earn for the value of the service it performs to its North Carolina subscribers.

The protestants contend on the other hand that the petitioner is now earning sufficient net revenue to pay all interest charges on its borrowed capital, pay a reasonable dividend to its stockholders, and set aside a reasonable and adequate surplus; that its credit standing is now rated at the highest, and that it is attracting sufficient capital to enable it to perform the necessary service required of it, and to improve and expand its facilities. Supporting their contention that the petitioner is now earning sufficient net revenue to meet all its needs, the protestants bring as an expert witness, Mr. David A. Kosh, a public utility consultant engaged in private practice with offices in Washington, D. C. Mr. Kosh had made a study of the cost of capital and a fair rate of return to Southern Bell, and presented detailed explanation of his study along with exhibits in support of his testimony. He testified that his analysis indicates a fair rate of return to the Southern Bell of no more than 6 per cent to be applied to a rate base substantially equal to net original cost of the company's property used in rendering service in North Carolina. Net investment at the end of the test period (March 31, 1954) was $84,779,611. Since the net operating income of the company on a going level as of March 31, 1954, was $4,225,290, its rate of return on the net investment at that date (on $84,779,611) was 5.02 per cent. On this basis there is a deficiency in the company's earnings of .98 per cent—in net revenue of $830,840, or in gross revenue of $1,987,448. The protestants contend however that notwithstanding this, the company is earning sufficient net revenue and does not need to increase its rates; among other reasons for this contention they point to its debt ratio, and a change made in Federal Internal Revenue Code for 1954 which provides two methods for accelerating depreciation for federal income tax purposes, in addition to the present method.

[3] The evidence discloses that Southern Bell is now operating with its capital divided on a ratio of approximately 78 per cent equity capital and 22 per cent debt. It is not disputed that debt capital can now be supplied at cost less than that required for equity capital, and thus the more a company borrows in relation to its total capital requirements, the less the cost of providing its capital. The protestants contend that the petitioner should borrow more money and bring its debt ratio up to approximately 40 per cent of its total capital, and that if this is done it will offset, in part at least, the present deficiency in its rate of return. The petitioner admits that its debt ratio can be raised to approximately 33⅓ per cent, and in asking for a rate of return of 6.75 per cent on the fair value of its property bases the same on a capital structure divided on a ratio of 33⅓ per cent debt, and 66⅔ per cent equity capital. The only means whereby the commission can deal with these contentions is to take cognizance of the division between debt and equity capital in arriving at the rate of return it will allow the company to earn on the value of its property. Various

companies which operate under the jurisdiction of the commission have various debt ratios, and generally speaking one of 33⅓ per cent is not considered out of proportion for a telephone company, and while in this case the commission does not say a debt ratio of 33⅓ per cent is too low—neither does it say that a ratio of 40 per cent would be too high. It has considered and given weight to all the facts in this case concerning the debt ratio, the circumstances which affect the same, and the contentions of both sides on the issue in arriving at the rate of return herein.

[4] Three methods have been provided for determining depreciation under the Federal Internal Revenue Code for 1954 for federal income tax purposes: One, the straight-line method, which has been followed by this company with the approval of the commission for many years, and the other two being accelerated provisions which are authorized to be used for income tax purposes and which permit the company to charge to depreciation during the first half of the life of the property, approximately two-thirds to three-fourths of the cost of property acquired since December 31, 1953. The protestants contend that test period operating results should be adjusted to reflect theoretical reductions in income tax payments if the company were to adopt the accelerated depreciation provisions of the Internal Revenue Code of 1954. To accept this would be to resolve prematurely the complex issues inherent in the determination of what action, if any, the company should take as a result of these new tax provisions. These issues embrace both questions of practicability as well as questions of regulatory treatment which cannot be fully determined from the facts before us. The commission has continuing jurisdiction over this company's operations. It will continue to study this matter and will require the company to advise the commission promptly of any change which it makes in its income tax returns as a result of these new provisions.

[5] The commission has weighed all the contentions made by both the petitioner and the protestants with respect to what the elements of a fair rate of return should be; the effect which the company's debt ratio should have upon the same; the effect which accelerated depreciation on property since December 31, 1953, might have upon the rate of return; the depressing effect which high cost construction whereby the costs of each station added exceeds the average cost of old stations in service; the cost of money and the best methods by which this company can finance its needs; the undisputed fact that a wage increase of $344,000 annually has been put into effect for the company's employees since the end of the test period; and after giving what the commission considers due consideration to each and every contention made by both the petitioner and the protestants, and all the evidence in support of the same, has concluded that the petitioner is not now earning a fair and reasonable rate of return on the fair value of its property used and useful in rendering intrastate service in North Carolina, and has further concluded that a rate of return of 6 per cent on the fair value of the company's said property is a proper and reasonable rate of re-

turn, and one which the petitioner is entitled to earn. Thus, we hold that the petitioner is entitled to a rate of return of 6 per cent on $89,000,000, the fair value of its property used and useful in providing intrastate telephone service to its subscribers in North Carolina.

The commission having found the appropriate rate base for this company as of the test period under consideration to be $89,000,000, which is the fair value of the petitioner's property used in rendering intrastate service in North Carolina; and having found that a rate of return of 6 per cent thereon is fair and reasonable to both the petitioner and its subscribers; it is now a matter of calculation as to what rates and charges will be necessary to produce said return. A 6 per cent rate of return on $89,000,000, amounts to $5,340,000. The present net income of the petitioner's property including new telephones which have been added to its system up to the time of the hearing of this cause is $4,255,290. This leaves a deficit in the petitioner's net income of $1,084,710. To produce a net addition to the petitioner of $1,084,710, its gross income must be increased by $2,595,000.

It is therefore, *ordered*:

(1) That the petitioner, Southern Bell Telephone and Telegraph Company, be, and it is hereby, authorized to increase its North Carolina intrastate telephone rates and charges to produce additional annual gross revenue not exceeding $2,595,000 based upon stations and operations as of March 31, 1954; and

(2) That the rates and charges prescribed and set forth on Appendix "A" [omitted herein], hereto attached, and which will produce the additional annual gross revenue provided by this order becomes the rates and charges to be made by Southern Bell Telephone and Telegraph Company in North Carolina, effective with the next billing date, or dates, immediately following the release of this order; and the commission having considered and examined the schedules of rates and charges as provided by Appendix "A", and having found the same to be accurate and proper for producing the annual additional gross revenue authorized by this order, orders said rates and charges to become effective with the next billings immediately following the release of this order; that the intrastate toll rates to become effective at 12:01 A.M. on December 21, 1954; and

It is *further ordered:*

That a copy of this order be transmitted under the seal of this commission to the petitioner and its attorneys of record, and to the protestants and the attorneys of record for the same.

Re Southern Bell Telephone & Telegraph Company

Docket 13784
December 13, 1954

PETITION *by telephone company of approval of 2-way, nonoptional, extended exchange service between two cities; granted.*

Service, § 445 — Extended area telephone service.

1. A telephone company's application for approval of 2-way, nonoptional, extended exchange service between two cities was approved where the same kind of service on an optional basis would be uneconomically prohibitive and where the benefits to the area would be generally compensatory by reason, among other things, of reduced toll charges and unlimited calling privileges, even though the rates to the residents of one area would be raised to the level of the rates in the other area without any appreciable advantages to certain individual subscribers, p. 56.

Discrimination, § 45 — Telephone rates — Subscribers' income.

2. It is impractical and discriminatory for telephone rates and services to be based on the personal income of individual subscribers, p. 56.

By the COMMISSION: The above-styled petition, filed with this commission on September 7, 1954, came on to be heard before the commission in the city hall, Fairhope, Alabama, on November 24, 1954, at 10 A.M.

On hearing petitioner averred that as a result of a number of requests by various civic leaders and telephone subscribers in the Fairhope exchange to eliminate all toll charges for calls between Fairhope and Mobile exchanges and the overlapping community of interest which has existed for several years, it conducted an opinion poll to determine whether or not 2-way, nonoptional, extended service was desired by the majority of its subscribers in the Fairhope, Alabama, exchange. No opinion survey was made of the subscribers in the Mobile exchange as there would be no rate change effected for these subscribers under the present statewide rate schedule.

An initial survey of the Fairhope business and residence subscribers was begun on June 11, 1954, and was in progress up until June 19, 1954, at which time this survey was suspended in view of the fact that a new statewide rate schedule was to be placed in effect on June 21, 1954. As of the date that this initial canvass was suspended, over 65 per cent of the Fairhope telephone subscribers had cast their votes with over 90 per cent of those who had voted being in favor of the proposed plan. On July 14, 1954, a resurvey of petitioner's Fair-

hope, Alabama, subscribers was begun to allow them to vote their convictions in regard to the proposed plan in the light of the rate adjustments and their effects under the new statewide rate schedule.

Letters were mailed to all Fairhope residence subscribers and those waiting for residence service outlining briefly this proposal and requesting a vote as to whether or not they were favorable or unfavorable to the plan. The vote was taken by requesting the return of a postal card enclosed with the letter. All business subscribers were contacted in person, the matter being explained to them and their vote received on a card signed by them.

Attached hereto and made a part hereof as Exhibit "A" is the result of the survey conducted by petitioner.

Notwithstanding that the commission has heretofore found similar surveys by petitioner to have been properly conducted and accurately reflective of subscriber opinion, the commission had a sample opinion poll of the subscribers made by its own representative. The findings of the commission representative verified the survey results herein submitted by petitioner.

A number of subscribers who were present at the hearing stated, generally, that they were in opposition to the granting of the petition for the reasons that the proposed service would increase their rates for local exchange service without rendering in return any material benefit to them, since they averred that most of their business interests are in the city of Fairhope and they rarely have occasion to communicate with the Mobile area. In addition, several subscribers stated that the proposed service would produce rates which they would be unable to pay.

A number of other subscribers, including city and civil officials, were also at the hearing, and stated that the proposed service was needed and desired by a substantial majority of the Fairhope subscribers, and that it would be in the interest of the Fairhope area generally, both from a social and commercial standpoint, for the proposed service and rates to be placed into effect. One former business subscriber in Fairhope averred that the unavailability of the service herein proposed was instrumental in the eventual discontinuance of his Fairhope business with a resulting loss of employment to a number of people.

[1, 2] The commission has devoted considerable study to the problems involved in this matter and is aware of the fact that optional, 2-way service in place of the present optional, one-way service is uneconomically prohibitive from a standpoint of the cost which would be required by petitioner to furnish such service. While the commission is aware that rates in the Fairhope area would be raised to the Mobile level by reason of the proposed change, with a corresponding hardship on some individual subscribers, it also feels that the benefits to the Fairhope area would be generally compensatory by reason, among other things, of reduced toll charges and unlimited calling privileges. It would be impractical and discriminatory for the commission to establish rates and services for individual subscribers of any utility based on personal income of such subscribers.

For the above reasons and in the

light of all other relevant facts in this cause, the commission is of the opinion and finds that the petition of Southern Bell Telephone and Telegraph Company, a corporation, filed in this cause on September 7, 1954, is consistent with the public interest, should be and will herein be granted.

The premises considered—

It is *ordered* by the commission that the petition of Southern Bell Telephone and Telegraph Company, a corporation, filed in this cause, on September 7, 1954, for approval of 2-way, nonoptional, extended exchange service between Fairhope, Alabama, and Mobile, Alabama, be and it is hereby approved, effective upon the installation of said service.

Jurisdiction of this cause is hereby retained for such further order or orders as the commission finds just and reasonable in the premises.

WEST VIRGINIA PUBLIC SERVICE COMMISSION

Re Hope Natural Gas Company

Case No. 4086
November 5, 1954

APPLICATION *by gas company for authority to increase rates; increase authorized as modified.*

Rates, § 146 — Natural gas company — Effect of supplier rate proceeding.

1. A natural gas company's proposed rate increase should be reduced where the claimed operating deficiency has been reduced by virtue of the pipeline supplier's withdrawal of a request to increase wholesale rates, p. 58.

Return, § 101 — Natural gas company.

2. A return of 6.20 per cent was considered reasonable for a natural gas company, p. 59.

By the COMMISSION: This proceeding came on to be heard this 5th day of November, 1954, upon the revision of Original Sheet No. 4, filed May 13, 1954, by the Hope Natural Gas Company, a corporation, hereinafter sometimes referred to as "Hope," of its Tariff P. S. C. W. Va. No. 9, designated Fifth Revision of Original Sheet No. 4, canceling Fourth Revision of Original Sheet No. 4 and Original Sheet No. 5, issued May 13, 1954, effective for all gas furnished on and after July 1, 1954, stating increased rates and charges for furnishing natural gas service in the entire territory served by it in the state of West Virginia as follows:

Rate											
First	2,000	cu.	ft.	used	per	month	$1.00	per	M	cu.	ft.
Next	98,000	"	"	"	"	"	.51	"	"	"	"
Next	400,000	"	"	"	"	"	.45	"	"	"	"
Next	5,500,000	"	"	"	"	"	.42	"	"	"	"
Next	44,000,000	"	"	"	"	"	.39	"	"	"	"
All over	50,000,000	"	"	"	"	"	.38	"	"	"	"

Delayed Payment Penalty

The above schedule is net. On all accounts not paid within the discount period stated in the special rules of the company, or in the case of industrial consumers within the discount period stated in the contract, 2 cents per M cubic feet will be added to the net amount shown.

Minimum Charge

The above schedule is subject to a minimum monthly charge of $2.

upon proof of the giving of notice of the filing of the aforesaid increased rates and charges and hearing thereon, as required by an order made herein on May 24, 1954, and by which order the aforesaid revised tariff sheet issued May 13, 1954, effective July 1, 1954, was suspended and the use of the rates and charges stated therein deferred until October 28, 1954, unless otherwise ordered by the commission; upon the evidence adduced at hearings held herein on July 15 and 16, September 1, September 15, and October 1, 1954; upon the brief filed on October 13, 1954, by the respondent, Hope Natural Gas Company; upon the brief filed October 19, 1954, by C. B. Johnson and Robert B. McDougle, attorneys for industrial protestants; upon the letter of the respondent, Hope Natural Gas Company, dated October 26, 1954, stating that it had no objection to an extension of the suspension of the rates and charges hereinbefore set out, from October 28, 1954, to November 10, 1954; and upon the order of the commission made on October 27, 1954, extending the suspension date of said rates and charges from October 28, 1954, to November 10, 1954, unless otherwise ordered by the commission.

From all which it appears that it is necessary that disposition of the matters involved herein be had before November 10, 1954, for the following reasons:

[1] 1. As a result of the Federal Power Commission's limiting the effect of escalation clauses in gas purchase contracts, the proposed increases of the Tennessee Gas Transmission Company, scheduled to become effective November 1, 1954, were withdrawn by said company, the effect of which was the elimination of that portion of Hope's cost of service incident to such previously proposed Tennessee increase, which resulted in reducing the deficiency in Hope's revenues for the test period used in this proceeding from $1,958,196 to $1,384,047; and by reason thereof the aforementioned Fifth Revision of Original Sheet No. 4, canceling Fourth Revision of Original Sheet No. 4 and Original Sheet No. 5, stating increased rates and charges should be canceled, as such rates and charges, if made effective, would make it necessary in any event for Hope to make a refund to all its customers, as the rates and charges are designed to produce revenue in excess of the amount needed to cover the deficiency now claimed by Hope.

2. The exhibits offered by the protestants and the commission's accounting staff show that Hope's revenues, based on the test period used in this proceeding, are deficient by at least $534,000, and by reason thereof Hope should be authorized to put into effect before November 10, 1954, such rates and charges as may be necessary to produce sufficient revenue to enable it to pay its reasonable and

necessary operating expenses, including taxes, and to provide for depreciation in and a reasonable return on the value of its property for rate-making purposes, otherwise the rates and charges hereinbefore set out will become effective on November 10, 1954.

It further appears that since the issues involved in this proceeding were discussed in detail in the briefs filed herein (and which have been very helpful), no useful purpose would be served by reviewing them in detail here, further than to state the conclusions reached by the commission after careful consideration of the positions taken by Hope, the protestants, and the commission's accounting staff, which conclusions are as follows, with the exception hereinafter noted:

Revenue at present rates	$13,681,543
Cost of service	14,318,066
Deficiency	$636,523
Adjustments:	
Cost of service allocated on basis of protestants' allocations factors which excluded leakage adjustment from demand factor and included an average leakage adjustment of 2.7283% instead of 4% in commodity factor	(112,094)
Injuries and damage expenses adjusted on basis of protestants' 5-year average experience of the respondent	(9,372)
Increased labor cost due to wage increase granted July 1, 1954	85,155
West Virginia Gross Sales Tax on required increased revenue	21,834
Adjusted deficiency	$622,046
West Virginia Gross Sales Tax on adjusted revenue to average heating season	19,846
Deficiency at 6% return	$641,892

[2] It further appears that the rate of return allowed in recent Hope cases before this commission has been 6 per cent; that little if any effort was made by Hope to show that there had been an increase in the cost of debt capital that would justify an increase in the rate of return; and that the evidence offered by Hope in support of its position that the rate of return should be 6¾ per cent, particularly the comparison made by witness Merrill of the yield on industrial stock as compared to the stock of public utilities, is not convincing because the unusual profits of the large industries could be one of the reasons for public utilities appearing before this and other regulatory bodies seeking authority to increase their rates by reason of increased operating costs.

It further appears that the situation in this proceeding is quite unusual in that Hope, in arriving at the deficiency in its income from its West Virginia business for the test period used herein, has assumed that if average temperatures had prevailed during the 1953, 1954 heating season, its West Virginia sales would have been increased by 1,199,153 Mcf, for which it would have received $545,565 in excess of the revenue it actually received for said period, without any assurance that it will sell the additional quantity of gas in the 1954, 1955 heating season.

Upon consideration of the foregoing and the entire record in this proceeding, the commission is of opinion and finds that the rates the respondent, Hope Natural Gas Company, is seeking authority to put into effect are not just and reasonable in that, admittedly, they will produce revenue substantially in excess of that required to enable the respondent to pay its reasonable and necessary operating ex-

penses, including taxes, and to provide for depreciation in and a reasonable return on the value of its property used and useful in its West Virginia business; and that by reason thereof the aforementioned Fifth Revision of Original Sheet No. 4 of the respondent's Tariff P.S.C. W.Va. No. 9 should be canceled.

Upon like consideration the commission finds that the respondent's present rates and charges are not just and reasonable in that they do not produce sufficient revenue for the aforementioned purposes; and that the rates and charges the respondent is hereinafter authorized to put into effect are just and reasonable and are designed to produce $14,417,757 annually, which should be sufficient for the aforementioned purposes, including a return of 6.20 per cent, which return the commission deems to be reasonable for the purpose of this proceeding, considering all the facts disclosed by the record herein.

The commission further finds that the rates and charges hereinafter fixed, except the minimum monthly charge, should not be applied to gas furnished in that area served by the Monongahela Power Company prior to the time it was taken over by the respondent herein.

It is, therefore, *ordered* that the aforementioned Fifth Revision of Original Sheet No. 4, canceling Fourth Revision of Original Sheet No. 4 and Original Sheet No. 5, of the respondent's Tariff P.S.C. W.Va. No. 9, be, and it hereby is, canceled and stricken from the tariff files of the commission.

It is *further ordered* that the respondent, Hope Natural Gas Company, a corporation, be, and it hereby is, permitted and authorized to put the following rates and charges into effect in the entire territory served by it in the State of West Virginia, except in that part of the territory formerly served by the Monongahela Power Company, in which territory only the minimum monthly charge hereinafter fixed shall apply:

Rate

First	2,000 cu. ft. used per month	$0.75	per M cu. ft.
Next	98,000 " " " " "	.47½	" " " "
Next	400,000 " " " " "	.42½	" " " "
Next	5,500,000 " " " " "	.40	" " " "
Next	44,000,000 " " " " "	.36½	" " " "
All over	50,000,000 " " " " "	.35½	" " " "

Delayed Payment Penalty

The above schedule is net. On all accounts not paid within the discount period stated in the special rules of the respondent, or in the case of industrial consumers within the discount period stated in the contract, 2 cents per M cubic feet will be added to the net amount shown.

Minimum Charge

The above schedule is subject to a minimum monthly charge of $1.50 in the entire territory served.

It is *further ordered* that the respondent, Hope Natural Gas Company, a corporation, be, and it hereby is, authorized to put the aforesaid rates and charges into effect on November 10, 1954.

WISCONSIN PUBLIC SERVICE COMMISSION

Re Milwaukee & Suburban Transport Corporation

2-SB-571
September 2, 1954; rehearing denied October 8, 1954

APPLICATION *by transit company for authority to issue chattel-mortgage notes; denied.*

Security issues, § 99 — Chattel-mortgage notes — Increase in debt ratio.

1. Issuance, by a transportation company, of chattel-mortgage notes to finance part of the cost of purchasing motor coaches would result in an unreasonable proportion of senior securities to the total security structure when, as a consequence, the debt ratio would be increased from 62.2 per cent to 64.5 per cent and the common stock equity would be reduced from 7.6 per cent to 7.2 per cent, p. 62.

Security issues, § 52 — Need for financing — New equipment — Transit company.

2. A transit company's application for authority to issue chattel-mortgage notes to finance part of price of the purchase of motor coaches will be denied where the company has or will have sufficient funds on hand to pay for the proposed equipment, p. 63.

By the COMMISSION: On June 29, 1954, Milwaukee & Suburban Transport Corporation, filed an application with the commission, under the provisions of Chap 184, Wisconsin Statutes, for authority to issue $642,000 principal amount of its 4 per cent chattel-mortgage notes to finance a part of the cost of purchase of 38 G.M. Model TDH 5105 transit-type, diesel hydraulic motor coaches.

Pursuant to due notice hearing was held at Madison on August 6, 1954, before examiner Rolfe E. Hanson.

APPEARANCES: Milwaukee & Suburban Transport Corporation, by Lines, Spooner & Quarles, Attorneys, by Maxwell H. Herriott; of the commission staff: Ralph S. Butler, accounts and finance department, and Fred C. Huebner, accounts and finance department.

Applicant's balance sheet as of May 31, 1954, is shown below as Table 1:

Table 1

Balance Sheet

Assets:	
Property and plant	$28,111,640.60
Less reserve for depreciation	15,149,978.06
Plant less reserve	12,961,662.54
Plant acquisition adjustments	(4,441,515.89)
Net plant account	8,520,146.65
Investments in securities of subsidiary companies	50,000.00
Total plant and investments	8,570,146.65

Current assets	
Cash	1,925,799.83
U. S. government securities	316,277.50
Injuries and damages reserve fund	422,950.93
Accounts and notes receivable	103,802.57
Due from subsidiary companies	12,356.15
Special deposits	21,250.00
Materials and supplies	657,084.73
Prepaid accounts	172,736.51
Total current assets	3,632,258.22
Deferred charges	509,230.43
Total	$12,711,635.30
Liabilities:	
Common stock	$515,000.00
Preferred stock, 5%	3,000,000.00
First mortgage bonds	3,200,000.00
Secured promissory notes	2,984,632.69
Total security structure	9,699,632.69
Current liabilities	
Accounts payable	295,283.01
Accrued payrolls	543,534.53
1954 vacation payroll	524,530.89
Taxes accrued	682,474.58
Interest accrued	75,538.60
Liability for injuries and damages	191,125.24
Other current and accrued liabilities	244,292.53
Total current liabilities	2,556,779.38
Reserve for injuries and damages	209,407.60
Earned surplus	245,815.63
Total	$12,711,635.30

( ) Denotes red figure.

[1] One of the provisions of Chap 184, Statutes, which is applicable to the pending application, is contained in § 184.05(4), the pertinent portion of which is quoted below:

"The amount of securities of each class which any public service corporation may issue shall bear a reasonable proportion to each other and to the value of the property, due consideration being given to the nature of the business of the corporation, its credit and prospects, the possibility that the value of the property may change from time to time, the effect which such issue will have upon the management and operation of the corporation by reason of the relative amount of financial interest which the various classes of stockholders will have in the corporation, and other considerations deemed relevant by the commission. . . ."

The capitalization of the company as of May 31, 1954, as shown above in Table 1 and, also, pro forma, after giving effect to the proposed issue of chattel-mortgage notes, would be as shown in Table 2 below.

It will be seen, from the above Table 2, that the company is already top-heavy with senior securities and that the proposal to issue $642,000 of additional debt would increase that debt

Table 2

	Actual		Pro Forma	
	Amount	%	Amount	%
First mortgage notes	$3,200,000	%	$3,200,000	%
Secured promissory notes	2,984,633		2,984,633	
Chattel-mortgage notes			642,000	
Total debt	6,184,633	62.2	6,826,633	64.5
Preferred stock	3,000,000	30.2	3,000,000	28.3
Common stock	515,000	5.2	515,000	4.9
Surplus	245,816	2.4	245,816	2.3
Total securities and surplus	$9,945,449	100.0%	$10,587,449	100.0%

ratio from 62.2 per cent to 64.5 per cent and reduce the common stock equity (common stock par value plus surplus) from 7.6 per cent to 7.2 per cent.

It appears clear that the "reasonable protection" to security holders, which the statute (§ 184.06) contemplates, would be ill served by the approval of the issuance of this form of security, and that the company would be well advised to use other methods to finance additional capital expenditures.

[2] Another provision of the statutes (§ 184.03(1)) provides, in part, as follows:

". . . the commission shall not authorize the issuance of securities for any purposes which are not proper corporate purposes, or in an amount greater than is reasonably necessary for such corporate purposes, *having in view the immediate requirements of of the corporation and its prospective requirements over a reasonable period in the future,* and other relevant considerations." (Emphasis supplied.)

In support of this statutory requirement, the company submitted, as Exhibit 2, a statement showing estimated monthly cash receipts and disbursements and, also, its estimate of the minimum cash balances required from June 1, 1954, to June 30, 1955. These data are summarized in the following Table 3 together with the adjustments thereto which would be necessary if the proposed financing were not accomplished:

Table 3

Estimated cash balance

Period	Including proposed financing	Excluding proposed financing	Minimum cash balance
June 1954 ...	$2,217,977	$2,217,977	$2,010,000
July 1954 ...	2,265,747	2,265,747	2,160,000
Aug. 1954 ...	2,145,857	2,145,857	1,890,000
Sept. 1954 ...	2,212,197	2,212,197	2,000,000
Oct. 1954 .	1,729,827	1,087,827	1,560,000
Nov. 1954 ...	1,856,757	1,227,597	1,700,000
Dec. 1954 ...	1,819,514	1,203,159	1,860,000
Jan. 1955 ...	2,158,584	1,554,999	2,010,000
Feb. 1955 ...	2,399,564	1,808,709	2,080,000
Mar. 1955 ...	2,184,184	1,606,024	1,780,000
Apr. 1955 ...	2,249,644	1,684,144	1,770,000
May 1955 ...	2,636,374	2,083,504	1,950,000
June 1955 ...	2,506,374	1,966,099	2,040,000
Average ...	$2,183,000	$1,774,000	$1,908,000

It will be noted, from Table 3, that, without any security financing, the company estimates that it will have, in June, 1955, $1,966,099 in cash, which is more than 96 per cent of what it terms its cash requirement of $2,040,000 at that time, and the monthly average for the total period is 93 per cent of what the company claims as its average monthly requirement. In addition, the company's estimate of required minimum cash balance includes $548,350 for income tax accruals made in 1953 in excess of actual tax liability shown on its tax returns. It may be that some additional tax liability may be imposed when the tax returns are audited at some future date, but pending that time the company has use of the funds; and, there is also the possibility that additional tax assessments may be less than anticipated.

In view of the evidence before the commission, it appears that the company has and will have, over a reasonable period in the future, sufficient funds on hand to pay for the proposed 38 motor coaches mentioned in its pending application without resorting

to the issuance of any additional securities at this time, and that, therefore, the prayer of the pending application should be denied. However, the company may, if it so desires, file a subsequent application for authority to issue common stock for cash if subsequent experience proves that the present cash forecast was materially insufficient and that the immediate need for additional cash is greater than is now apparent.

Findings of Ultimate Fact

The commission finds:

1. That the proposed issue of $642,000 of chattel-mortgage notes does not comply with the provisions of Chap 184, Wisconsin Statutes, and would result in an unreasonable proportion of senior securities to the total security structure, due consideration being given to the various relevant items mentioned in § 184.05(4), Statutes.

2. That the financial condition, plan of operation, and proposed undertakings of the corporation are not such as to afford reasonable protection to the purchasers of the proposed securities.

3. That no amount of additional securities is reasonable for the purposes stated in the pending application, having in view the immediate requirements of the corporation and its prospective requirements over a reasonable period in the future and other relevant considerations.

Conclusion of Law

The commission concludes:

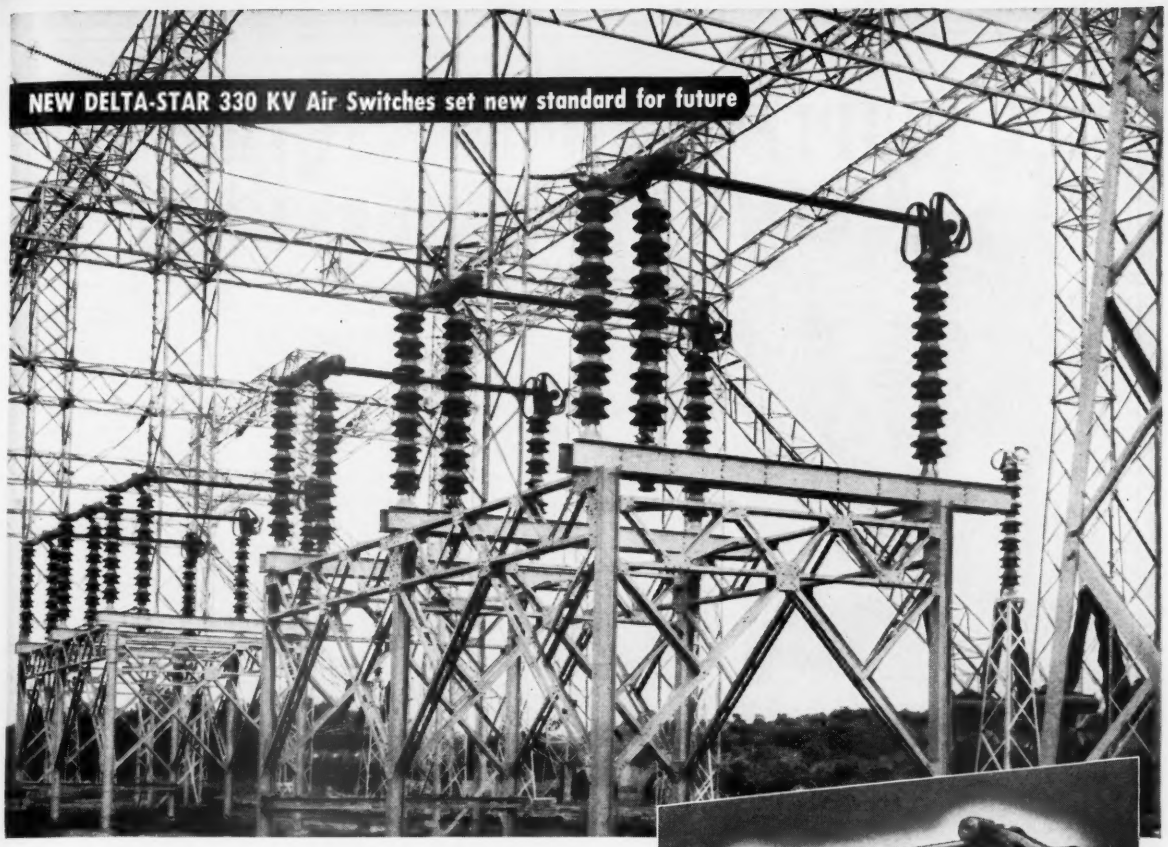
1. That, in view of the above findings of fact, no certificate of authority, as prayed for in the pending application, may be issued.

2. That the prayer of the application should be denied.

ORDER

The commission therefore *orders:*

That the prayer of the pending application in the above-entitled matter be and the same is hereby denied.



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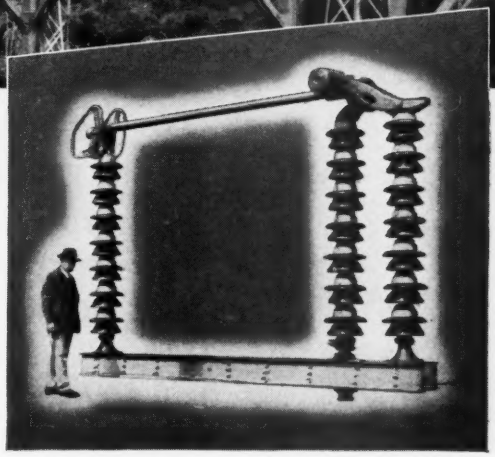

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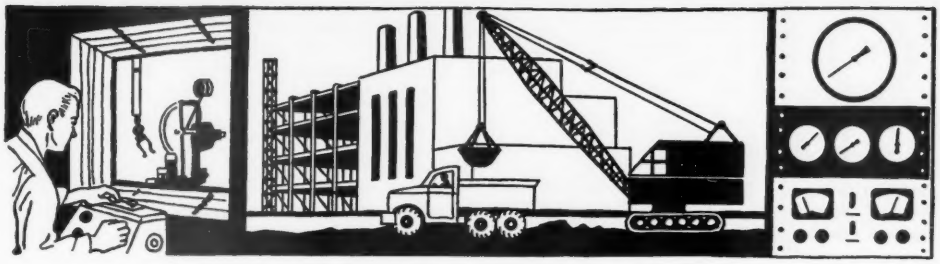
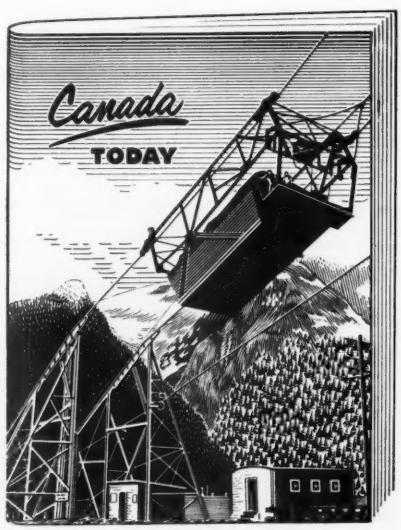


Industrial Progress

Our Northern Neighbors Look to Hydro Expansion

THE August 2, 1951 issue of PUBLIC UTILITIES FORTNIGHTLY carried as a leading feature an article written by Cyril Bassett of The Financial Post (Toronto) entitled "Canadian Hydro Keeps Pace with Industrial Expansion." Needless to say there has been a great deal more expansion executed and planned by Canadian utilities since the publication of the Bassett article. In recognition of the tremendous strides being made by our "neighbors to the north" there follows a partial compilation of various announcements which have been made over the past couple of months which illustrate more recent developments. At a later date a further list of such notices and proposed projects may be included as the information becomes available.

By the end of 1955 the Dominion should have a million more horsepower in hydroelectric capacity than it had developed by the end of 1954. Last year, however, broke all records for the amount of new hydro-electric generating capacity with a total of over 1,750,000 horsepower brought into operation. This compares with the previous high of 1,066,000 horsepower put on the line during 1952. The present year is expected to approach or equal the 1952 totals in new hydro capacity, according to reports. The greatest single additions were the Hydro-Electric Power Commission of Ontario's Sir Adam Beck Generating Station No. 2, (735,000 h.p.) and the Kemano-Kitimat project of the Aluminum Company of Canada, Ltd. (450,000 h.p.). Other new plants and units added to existing installations are well distributed across the Dominion.



Aerial tramway at ALCAN's Kemano-Kitimat-Nechako project in British Columbia. (Cover design from booklet, "Canada Today." Courtesy of The Bank of Montreal).

Canadian Hydro Expansion in 1955 and Later

New plants and expansions under construction for operation in 1955 total roughly one million h.p. and those for operation in later years, about 2,400,000 h.p. Of course, in addition to this amount there are several sites under study and at which development will be undertaken in a matter of a few years.

In addition to hydro, several companies plan additions to existing steam generating stations. In the field of power distribution new main transmission lines were completed or under construction in many parts of the country such as in the Fraser river area behind Vancouver, B.C. Submarine cables have been laid in the lower St. Lawrence and across the Strait of Georgia.

The turbine and generator has been ordered for a fourth unit of 150,000 h.p. at the great Kemano-Kitimat project of ALCAN for 1955 operation. Ultimate capacity at the underground powerhouse is placed at 2,000,000 h.p. This $500,000,000 project will incorporate the huge aluminum smelter at the port of Kitimat, already in partial operation, a giant dam at Nechako, now completed, and the world's largest underground power development at Kemano. No further scheduling of additional units has been announced.

Consolidated Mining and Smelting Company of Canada has added to capacity in British Columbia with the completion of its Waneta development on the Pend Oreille river (240,000 h.p.). The project has been planned for eventual doubling of its present capacity. No schedule has been set on this to date. The mining company has a total of eight hydroelectric plants in southern British Columbia (642,600 h.p.)

British Columbia Electric Company Plans Record Construction

President Dal Grauer, announced early this year that BCE's record construction budget of $38,500,000 would make 1955 the biggest in the company's 58-year history. This is the largest sum the company has earmarked for gas, electric and transportation within a single year. The

(*Continued on page* 28)

lion's share of these funds will be put into expansion of the electrical facilities of the BCE system. This portion is broken down as follows:

Three hydro projects	$12,150,000
New substations	7,600,000
Electric distribution	3,950,000
High voltage transmission	3,400,000
Distribution system	3,200,000
Submarine cable	1,050,000
Electric service	1,850,000
Trolleys to coaches	1,650,000
Gas facilities	1,000,000
Other capital items	2,650,000
1955 Total	$38,500,000

President Grauer of BCE said that if and when the Federal Power Commission approves the sale of Peace river natural gas to the United States—which will in turn assure the Lower Mainland's receiving this fuel—the company would launch a 12 to 15 million dollar expansion program for natural gas service.

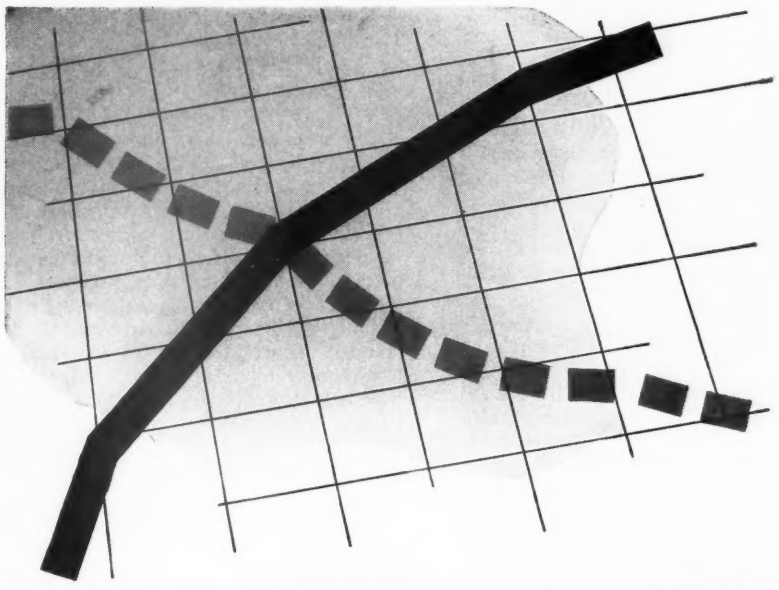
Canadian Government Blocks Hydro Power Export

Plans for hydro development on the Columbia river in British Columbia by Kaiser Aluminum Company were dealt a blow by the recent action of the Canadian federal government in curbing export of power. The British Columbia provincial government has approved the proposed Kaiser plan to build a $30,000,000 dam at the foot of Arrow lakes for storage of water for power plants in Bonneville, Washington. The projected agreement was said to run counter to the Canadian government's plans for long-range development on the Columbia river. The Ottawa government warned the provincial government of Premier Cecil Bennett that, if the latter insisted on the Kaiser agreement, legislation to stop the project would be pushed through the Federal Parliament. This legislation has now been passed by Parliament and it requires a federal license for construction of a facility affecting the flow of water on an international stream.

Status of Proposed Mica Creek Project Under Cloud

The Canadian government action, noted above, casts a pall over plans of the Puget Sound Utility Council which proposed to sponsor a large hydro development at Mica Creek on the Columbia river within British Columbia. The Council comprises some five operating utilities in the Puget Sound-Cascade area: Seattle City Light, Tacoma City Light, Puget Sound Power & Light Company, Snohomish County Public Utility District No. 1, and Chelan County Public Utility District No. 1. The Mica Creek project would have an installed capacity of 900,000 kw of power. Envisioned as a $250,000,000 project its main dam would be on the Columbia river at the Mica Creek site 200 miles north of the International Boundary. Additional downstream dams would bring in

(*Continued on page* 30)



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a total of 1,700,000 kw of power. Construction was proposed on a "partnership" basis with Puget Sound Utility Council paying for the construction and ownership title remaining in the hands of the British Columbia government. The power facilities at the proposed Mica Creek and downstream dam sites would be built and paid for by the Canadians with power going into their own system locally. The dam would benefit the council largely as a water storage project with controlled release benefiting power production at projects under construction (or proposed) on the American side of the border. It was assumed by the council that the Canadian dams, with a total of 1,700,000 kw, would attract large industries such as chemicals and light metals, including electro-processing of Canadian titanium ore and petrochemicals.

Yukon Territory Now Looking to Hydro

In the Yukon Territory, Northwest Power Industries, Ltd. is investigating hydro possibilities and plans a major development similar to Kitimat but with a higher ultimate capacity, perhaps in the area of 4,300,000 h.p.

The Yukon Hydro Company, Ltd. plans to build a plant of some 800 h.p. involving the diversion of water, from an existing plant at Porter creek, into McIntyre creek.

Utility Projects in Alberta

Calgary Power, Ltd. in Alberta has completed its Bearpaw development on Bow river (20,750 h.p.) and has also brought onto the line a third unit (30,000 h.p.) in its Ghost plant. Total capacity of the latter plant is now 96,000 horsepower. Construction is under way on two new sites on the Kananaskis river with 6,900 h.p. slated for the Upper Kananaskis Lake and 18,500 h.p. at the Pocaterra site. Both are to be in operation by the end of 1955, according to reports. Calgary Power has extended its transmission system by 142 miles of 66kv line and 114 miles of lower voltage lines. The company also plans a steam plant at Wabamun with a 66,000 kilowatt capacity.

Canadian Utilities, Ltd. plans a new unit in its Astoria hydroelectric plant at Jasper. It has been reported that nearly 30,000 farms in Alberta are receiving electric power service. Of these, 22,000 are served by Calgary Power, Ltd. and 7,000 from Canadian Utilities, Ltd.

Major Additions in Saskatchewan

Saskatchewan Power Corporation has made large additions to its generating capacity. A new unit has been completed in the company's Saskatoon steam plant bringing the plant's total capacity up to 75,000 kw. The company reportedly serves some 12,000 farms in the province according to year-end count.

McArthur Project on Winnipeg River, Manitoba

The Manitoba Hydro-Electric Board is proceeding on schedule with construction of the McArthur Falls development on the Winnipeg river. The power plant (80,000 h.p.) is to be completed by July, 1955. Investigations are being carried out at the point where the Saskatchewan river flows into Lake Winnipeg looking toward development of about 300,000 h.p. by 1960 but no firm plans have been made to date. Plans are going forward on a steam station at Brandon (120,000 h.p. ultimate capacity) for operation in 1957.

The announcement in December, 1954, that McArthur project had four units "on the line" climaxed a two-year struggle to meet the target date. Power from the Manitoba Hydro-Electric Board's project is fed into the Winnipeg Electric Company's system.

The four generators with an ultimate capacity of 7,650 kw each, are adding their quota to the power from plants at Pine Falls, Great Falls and Seven Sisters Falls. By the end of this summer four more units will be in operation at the McArthur project. Winnipeg Electric official statements observed in 1953 that "it is a reasonable assumption that over three quarters of a million kilowatts of generating capacity will be needed to serve Winnipeg Electric Company customers in 1963." The company now states that this assumption of over a year ago is more than supported by the experience of 1954. The new units of the McArthur project to be brought in this summer will bring WECO's system total generating capacity to 436,000 kilowatts. Over 41,000 farms in Manitoba are receiving power.

Ontario Hydro Developing Both Large And Small Projects

The Hydro-Electric Power Commission of Ontario is vigorously pushing its hydro expansion plans and making rapid strides on its large Niagara river development as well as other smaller projects. Preliminary operations have been undertaken in connection with its participation in the international development of the St. Lawrence river. Seven generating units of the Sir Adam Beck—Niagara generating station No. 2 were put in service during 1954 and five more units are expected to be in operation before the end of 1955. Total installed capacity will be 1,260,000 horsepower. Ontario Hydro Commission has completed the first of two additional units (45,000 h.p. each) at the Pine Portage generating station on the Nipigon river. This brings the total installation of four units to 172,000 h.p.

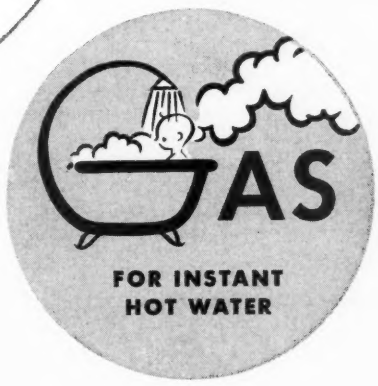
Work is proceeding at Manitou Falls generating station on the English river.

Present plans call for three units of 18,500 h.p. each. Space for a fourth unit is provided for and its construction will be scheduled as soon as it is needed.

Hydro Power in Quebec Province

A number of projects are under way in the Province of Quebec for completion this year or in later years. Shawinigan Water & Power Company is expanding its hydro facilities to meet the constantly increasing power demands of new retail customers and those of the asbestos, pulp and paper, and electro-chemical industries. A special expansion plan is scheduled for the next three years to keep pace with these demands. Total output of Shawinigan's plants, last year, was 6,269,000,000 kilowatt-hours. Purchased power brought the company's total output to over 9,000,000,000 kwh. The company has generating stations with a total installed capacity of 1,500,000 h.p. at six sites on the St. Maurice river, including that of its wholly-owned subsidiary St. Maurice Power Corporation, and two smaller plants on other rivers. It is considering developments at four other

(*Continued on page* 32)



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potential power sites on the St. Maurice and, this year, will add units at three existing plants to raise total capacity by 158,500 h.p. Preliminary work is under way on an additional unit at Rapide Blanc (an added 44,500 h.p.), at La Trenche (additional 65,000 h.p.) and at La Tuque (additional 49,000 h.p.). This additional 158,500 horsepower will be in use this year. In 1954 the company's research staff succeeded in producing high-grade titanium metal experimentally on a small scale employing electrolytic means, using Sorel slag as a raw material. Patents for the process have been obtained in several countries and development of the work has progressed to the pilot-plant stage according to reports. Electro-metallurgical industries attracted to the province over recent years are creating additional demands for electric energy.

There has been an increased demand for power on the part of residential customers and 10,000 new customers were added during 1954. Steady growth in the distribution system is anticipated for the foreseeable future. Shawinigan owns 2,180 circuit miles of high-voltage transmission line and 10,500 pole-line miles of distribution lines in its 16,000 square mile service area in the Province of Quebec. High voltage lines connect the Shawinigan system with its subsidiary, the Quebec Power Company, the Quebec Hydro-Electric Commission (government-owned and operated) the Saguenay Power Company, Ltd., and Southern Canada Power Company, Ltd.

Gatineau Power Company has under construction for completion this year a new unit at Paugan Falls (47,000 h.p. addition). Northern Quebec Power, Ltd. is installing an additional (35,000 h.p.) unit at its Quinze plant on the Upper Ottawa river for completion in 1955, also. The St. Marguerite Power Company's plants are delivering power to Seven Islands and Clarke City.

Quebec Hydro-Electric Commission

Two units of 16,000 h.p. each have been completed in the Quebec Hydro-Electric Commission's Rapid II plant on the Upper Ottawa river. The third unit is under installation and provision has been made for a fourth which will give the plant an ultimate capacity of 64,000 h.p. Three units of the Bersimis river project are expected to be in operation by 1956. Ultimately this plant will contain eight units of 1,200 h.p. At the Beauharnois plant on the St. Lawrence the commission's work is proceeding apace.

Power in the Maritimes

The New Brunswick Electric Power Commission has undertaken development of the St. John river. A plant at the Beechwood site will consist initially of two units (45,000 h.p. each) with a third unit to be added when required. Completion is set for 1957. The commission is making an addition to the steam plant at Chatham for completion in September, 1956.

In Nova Scotia, the Nova Scotia Light & Power Company completed a 9,000 h.p. development in a plant on the Nictau river near Middleton. The company has under construction an additional 25,000 kw unit in its steam plant at Halifax. Nova Scotia Power Commission has two units in progress for a 6,000 h.p. plant on the Mersey river which is to be completed this year. Also, a 20,000 kw unit at its Trenton steam plant which will be on line early this year.

Newfoundland Light & Power has a new 10,000 kw steam plant under construction at St. Johns. It will be ready for operation in 1956. Provision has been made for an additional unit to be built as soon as required. United Towns Electric Co. is constructing a 2000 h.p. development on New Chelsea brook near New Chelsea.

British Newfoundland Corp., Ltd. has been carrying out investigations on the Hamilton river in Labrador for a project at Grand Falls which site has a power potential of about 3,500,000 h.p. This makes the locale one of the major undeveloped power sites in Canada.

"Canada Today"

Summing up Canadian Hydro expansion is a concise statement contained in "Canada Today" an attractive booklet issued by the Bank of Montreal and exemplifying the interest of Canada's financial institutions in the resources development of the dominion. This 100-page pocket-sized atlas is a handy and informative brochure on Canadian progress. It observes:

> "Canada has a fresh-water lake area of 235,677 square miles. This is larger than the fresh-water area of any other country. As all these lakes are above sea-level, their outflow in descending to the sea creates sources of potential energy at many sites. More than half of this potential power is found in the provinces of Ontario and Quebec, which are without known commercial fuel deposits and in which about 65 per cent of the industrial development of the country is now concentrated.
>
> "Canada is second only to the United States in the development of water-power. In 1953 its . . . hydro-electric power plant capacity produced more than 70 billion kilowatt-hours of electric energy. This is still only about one fifth of the power which Canada can produce by harnessing all its known power sites." (The cut appearing in the columns at the beginning of this article is taken from the cover of this booklet. Reproduction Courtesy of the Bank of Montreal).

Record Power Production in Canada—1954

The latest available official report on power output in Canada states: "Production of electric energy by central electric stations in the full year 1954 reached an all-time high of 69,136,584,000 kilowatt-hours, 5.6 per cent above the preceding year's 65,489,253,000 kwh. At the same time consumption rose 5.2 per cent . . .

> "All provinces shared in the increased production in the year 1954, Quebec accounting for almost one-half of the national total at 34,732,279,000 kwh. . . . Ontario's output climbed to 20,963,613,000 kwh . . . and British Columbia's to 5,371,338,000 kwh. . . . " (Source: Canadian Weekly Bulletin, February 25, 1955.)

Depending upon additional information, a further compilation of achievements of Canadian public utility companies as their announcements come to attention will be noted in a future issue of PUBLIC UTILITIES FORTNIGHTLY.

(*Continued on page 33*)

INDUSTRIAL PROGRESS

(*Continued*)

Canadian Construction to Increase in 1955

PROJECTED private and public investment outlays for new construction, machinery and equipment in Canada will be approximately 6 per cent greater in 1955 than the expenditure in 1954, according to a report tabled in the House of Commons recently by the Minister of Trade and Commerce, C. D. Howe.

The report, entitled "Private and Public Investment in Canada—Outlook 1955" states that capital expenditures anticipated for 1955 will amount to $5.8 billion, compared with $5.5 billion spent in 1954.

The additional strength in the 1955 capital expenditure program is expected to arise from increased activity across a wide range of industries. The mining industry, with emphasis on further development in the petroleum field, is expected to show the most rapid increase. Spending by utilities will likely approximate 1954 levels.

Canadian Firm Seeks More Gas For Shipment to U. S.

WESTCOAST Transmission Company, Ltd., Calgary, Canada, is seeking to increase its authorized withdrawals of natural gas from Alberta's Peace river area, most of which is slated for export to the United States' Pacific Northwest.

Westcoast is asking the provincial Conservation Board for authority to raise its extraction of Peace river gas to 56 billion cubic feet a year from the 42 billion now allowed. It is also making plans for a second pipeline from the Peace river region to the United States, which it believes reserves in the gas field will be sufficient to justify in five years.

Westcoast is also expected to take about 70 billion cubic feet a year from nearby British Columbia fields. With the proposed Alberta increase that would give it about 126 billion cubic feet a year, or about enough to provide 300 million cubic feet daily for United States markets under its contract with Pacific Northwest Pipeline Corp.

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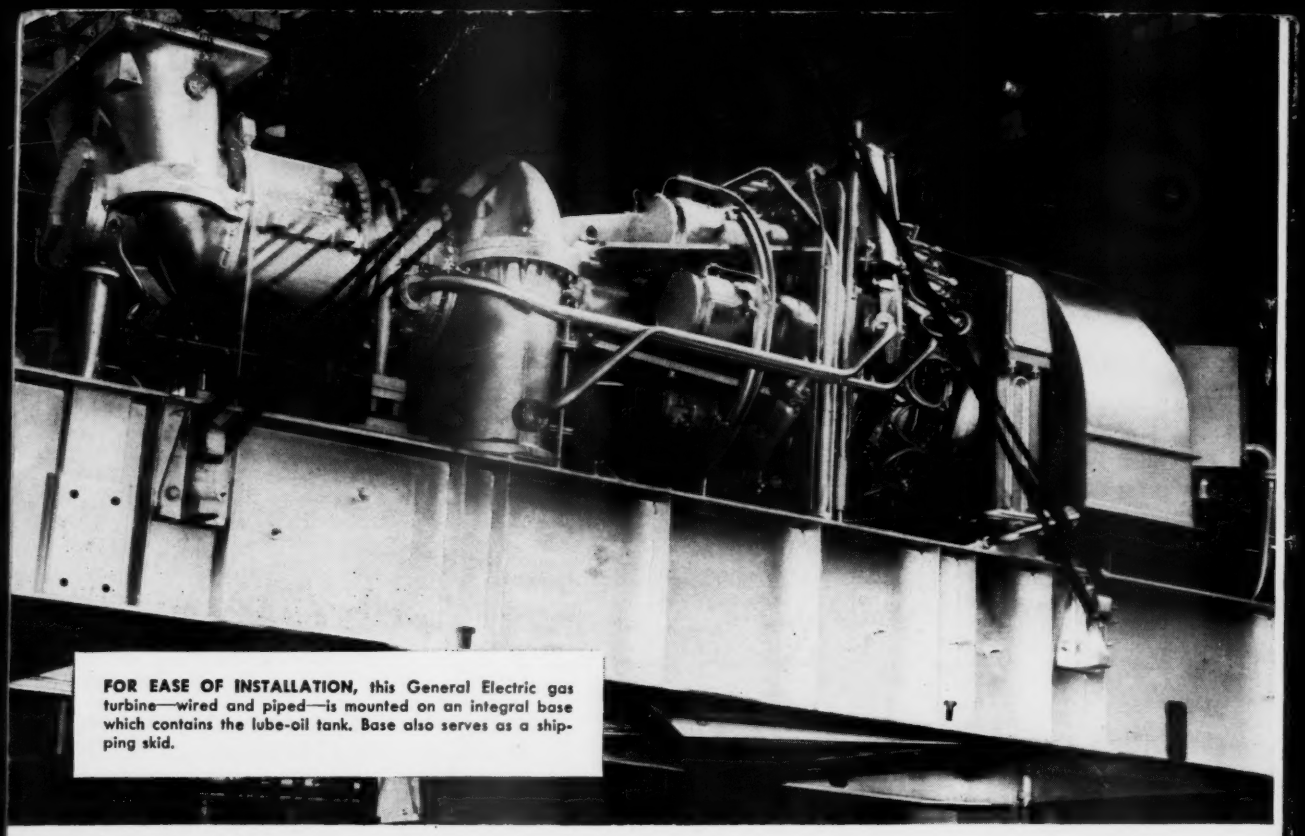

FOR EASE OF INSTALLATION, this General Electric gas turbine—wired and piped—is mounted on an integral base which contains the lube-oil tank. Base also serves as a shipping skid.

Gas turbines can mean new system economies

Operating records confirm that they can boost station capacity and efficiency in combination with steam turbines

IMPROVED PLANT EFFICIENCY results from gas turbine's ability to produce steam with hot exhaust gases. A. G. Mellor, Power Generation Engineer (left) and J. R. Casey, Manager—Gas Turbine Marketing, discuss economies resulting from obtaining steam from gas turbines for use in steam turbine cycles.

Field reports on gas turbine performance plus recent design advances add up to a new approach for many electric utilities to improve efficiency at attractively low dollar investment per kilowatt.

GAS-STEAM TURBINE CYCLE

Simple cycle gas turbines can be used in combination with steam turbines, where the hot exhaust gases from the gas turbine are reclaimed in a recuperator to heat the feed water in the steam cycle. This offers the possibility of increasing station capacity beyond the rating of the gas turbine and increasing station efficiency. In the Rio Pecos station on West Texas Utilities' system, for example, a 5000-kw unit advanced station capacity by 6611 kw, lowering station heat rate by 15.2 percent at the same time.

NEW TECHNOLOGICAL ADVANCES

General Electric has built and installed 17 gas turbine units in electric utility plants. This is over 90 percent of the gas-turbine generators in use today in this country's utility industry, and it represents an unequalled fund of design and field experience. This extensive practical background has resulted in improved designs and reduced installation costs. Gas turbines now can be used for small and medium base-load plants, end-of-line generation, standby, and peak-load stations, as well as topping units.

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